

AC 4412(1) ROCHESTER

CITY OF ROCHESTER



ANNUAL REPORT

of the

Medical Officer of Health

of the

City and Port of Rochester

1951

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FOR THE YEAR 1951

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MEMBERS OF THE HEALTH COMMITTEE, 1951/52.

Chairman — Councillor G. A. Tickner, C.C.

Vice-Chairman — Councillor G. E. Washford.

The Mayor — Councillor A. A. J. Anderson, J.P.

The Deputy Mayor — Alderman E. Washford.

Aldermen A.C. Lyle, W. Longley, A. Fray, J.P., W.S. Searle, C.S. Knight, J.P.

Councillor F.C. Burton
 Councillor W. Wilkinson
 Councillor H.R. Swain
 Councillor J.D. May
 Councillor H. Wilson
 Councillor C.H.R. Skipper, J.P., C.C.
 Councillor N.W. Wood
 Councillor R.M. Pattenden
 Councillor M.H. Cole
 Councillor J.W. Leech
 Councillor J.H. Lower
 Councillor J.W.H. Watson
 Councillor Lt.-Col. H.S. Shave, O.B.E.
 Councillor F. Corry
 Councillor J.H. Bryden
 Councillor L.E.D. Darley
 Councillor S.H. Swayland
 Councillor Mrs. F. Gray

MEMBERS OF THE PORT HEALTH COMMITTEE, 1951/52

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The Mayor — Councillor A. A. J. Anderson, J.P.

The Deputy Mayor — Alderman E. Washford.

Aldermen A.C. Lyle, W. Longley, A. Fray, J.P., W.S. Searle, A.T.H. Ring, C.S. Knight, J.P.

Councillor W. Wilkinson
 Councillor H.R. Swain
 Councillor J.D. May
 Councillor H. Wilson
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 Councillor J.H. Bryden
 Councillor L.E.D. Darley
 Councillor S.H. Swayland
 Councillor Mrs. F. Gray

STAFF

Medical Officer of Health

J.O. MURRAY. M.D. (Edin.Univ.) Ch.B. (Edin.Univ.)
D.P.H. (Liverpool Univ.)

Joint Appointment. Medical Officer of Health, Borough of Chatham.

Deputy Medical Officer of Health

J.H. WHITTLES. M.D. (Lond.), B.S. (Lond.), D.P.H. (Lond.), Resigned 7.12.1951

Senior Sanitary Inspector

E.W. BARTON C.R.S.I. C.M.I.

Sanitary Inspectors

A.H.W. CHAPMAN C.S.I.E.J.B. C.M.I.
A.A. FIRTH C.S.I.E.J.B. C.M.I. (Resigned 14.2.51).
J. HOGG C.S.I.E.J.B. C.M.I.
W.G. THURSTON C.S.I.E.J.B. C.M.I. (Resigned 22.8.1951).
R.S. LANE, C.S.I.E.J.B. C.M.I. (Appointed 1.5.51).
P.A. DRINKWATER C.S.I.E.J.B. (Appointed 1.11.51).

Port Health Inspector

C.H.N. EVANS C.S.I.E.J.B. C.M.I. A.I.N.A.

Veterinary Surgeon (Part-time)

D.G. LEWIS M.R.C.V.S.

Clerks

Miss V.F.M. JENKINS
Mrs. E. GWYER
Miss M. LAMB (Resigned 14.2.1951)
Miss J. DEVINE
Miss S. SMITH (Appointed 19.2.51)
(Resigned 31.7.51)
Miss M. EADES (Appointed 31.7.51)

PUBLIC HEALTH DEPARTMENT,
1, ESPLANADE,
ROCHESTER.

September, 1952.

TO THE MAYOR, ALDERMEN AND COUNCILLORS OF THE CITY OF ROCHESTER.

YOUR WORSHIP, MADAM AND GENTLEMEN.

I have the honour to submit my Report for 1951 and in this introductory note I have commented on several matters which may be of more general interest than a perusal of the statistics embodied in the report.

Population - Census 1951: 43899; Live Births 723; Still Births 21; Deaths 515.

The Census Population at 8th April, 1951 was 43,899, 21,409 males, 22,490 females. The Censal Increase 1931 to 1951 was 11,522 representing a 35.6 per cent increase on the 1931 Census. The Registrar-General's mid-year estimated population for 1950 was 43,130 and 43,700 for 1951.

The Live Birth Rate was 16.5 (723 Live Births). In 1950 it was 15.2 (656 Births). There were 21 still births as compared with 13 in 1950.

Deaths from all causes numbered 515 (448 in 1950) of which 252 were due to disease of the Heart and Circulatory System, 83 to Cancer, 46 to Respiratory Disease, 20 to Tuberculosis and 20 to Accidents inclusive of 13 motor fatalities.

Twenty-nine Infants died under one year of age, giving an Infantile Mortality Rate of 40 as compared with 35 in 1950 and 23 in 1949. This increase is associated with a larger number of deaths attributed to Prematurity (12) and Congenital Deformity (9) from which causes 18 died within two weeks of birth. The Infantile Mortality Rate is an index of the health of the community. The local figures being small do not justify conclusions based on any one year but the following comparative figures for the past six years indicate that there is room for improvement in the social and environmental conditions and a need for more education on health and prevention of disease.

Infantile Mortality Rate.

	1946	1947	1948	1949	1950	1951
148 Smaller Towns 25,000 to 50,000 population.	37	36	32	30	29	28
London	41	37	31	29	26	26
ROCHESTER	36	60	27	23	35	40

Housing.

Housing conditions, on which I have commented adversely in previous reports, still await a satisfactory solution. During 1951 263 houses were erected, 49 being built under private enterprise and 214 by the Local Authority. The number of houses built annually from 1945 to 1951 was 206; 272; 167; 392; 227; 317; 263; a total of 1,844 houses. The total number built in the seven pre-war years 1932 to 1938 was 3,185, of which 2,856 were erected by private enterprise.

Infectious Disease.

1,108 cases of Measles were notified which is the highest recorded rate since the disease became notifiable in 1940, the previous highest number being 544 in 1948. There were no deaths from Measles but Whooping Cough which infected 396 persons, of which 7 were adults, caused 2 deaths.

Influenza was prevalent in January and February but there was a rapid fall in its incidence during March

No cases of Diphtheria have been notified since 1947. This satisfactory state of affairs can only be maintained if immunization against the disease is continued at a high level 582 children were immunized during the year and 857 received a re-inforcing injection.

There were 465 primary Vaccinations against Smallpox and 174 revaccinations.

Clean Food Campaign

In addition to general health propaganda the Clean Food Campaign was continued throughout the year. Propaganda is carried out jointly, by Rochester and Chatham Corporations and the following figures indicate the activities during the year

	Total Number Attending
Lectures to School Canteen Staffs	210
Demonstrations and Film Show for food handlers (This Film Show was run with the help of the Central Office of Information)	473
Lectures to the public on Clean Food Production...	170

In co-operation with the Crusader Insurance Company, an exhibition dealing with various public health activities and activities of voluntary associations was held in the Belsey Hall Rochester. Appropriate films were shown for mothers and children. It is estimated that 2 500 people visited the exhibition during the week

Byelaws

Byelaws made under Section 15 of the Food and Drugs Act 1938 became operative in May, 1950. During 1951 there were 11 contraventions under the Byelaws which were dealt with effectively by informal action.

Appendix.

Appended to the report is a resumé on some aspects of the social and medical history of the ancient Port of Rochester.

Appreciation

I have again to record my appreciation of help I have had from all members of the Staff and from my colleagues in other departments to whom I am indebted for much information which is embodied in the report.

I also wish to thank the Chairman and Members of Committees whose support and guidance has been of great value.

I am Madam and Gentlemen

Your obedient servant

J. O MURRAY

Medical Officer of Health

A STATISTICAL AND SOCIAL CONDITIONS OF THE AREA

Area (in acres) Land and Inland Water	4, 108
Population - Census 1931. 32377	
1951 43899 increase 11522 = 35.6%	
Estimated R.G. (Mid. 1951)	43,700
Number of houses inhabited (end 1951) according to the Rate Books	13,268
Rateable Value...	£304,609
Sum representing a Penny Rate...	£1,185
Number of houses built during 1951 - Corporation 214)	
Private Enterprise 49)	263

TOTAL BIRTHS. (Live and Still).

	Total	M.	F.	Total
Live Births. Legitimate	692	357	335)	723
Illegitimate	31	14	17)	
Still Births. Legitimate	20	10	10)	21
Illegitimate	1	-	1)	
Birth Rate per 1,000 persons living	16.54			
Still Birth Rate per 1,000 persons living..	0.48			

TOTAL DEATHS - All causes at all ages 515

Death Rate per 1,000 persons living 11.78

Deaths from Puerperal Causes 1

Natural increase in population (excess Births over Deaths) 208

DEATH RATE OF INFANTS UNDER 1 YEAR OF AGE

Total Infant Deaths	29
All Infants per 1,000 Live Births	40.1
Legitimate Infants per 1,000 Legitimate Live Births	37.57
Illegitimate Infants per 1,000 Illegitimate Live Births	96.77
Deaths from Measles (all ages)	Nil
Whooping Cough (all ages)	2
Diarrhoea (all ages)	5

The Registrar-General's Table of Causes of Deaths is shown on page 15.

The following Table shows a comparison between this district and other parts of England and Wales.

	Live Birth rate per 1,000 resi- dent population	Deaths per 1,000 population	Deaths under 1 year per 1,000 registered live births
England and Wales	15.5	12.5	29.6
126 County Boroughs and Great Towns including London	17.3	13.4	33.9
148 smaller Towns, resident population 25,000 - 50,000 at Census	16.7	12.5	27.6
London	17.8	13.1	26.4
ROCHESTER	16.54	11.78	40.1

PRINCIPAL CERTIFIABLE CAUSES OF DEATH

		Percentage of Total Deaths
Diseases of the Circulatory system including Heart Disease and Cerebral Haemorrhage	252	48.9
Cancer	83	16.1
Respiratory Disease -		
Pneumonia (all forms) 10)		
Bronchitis 30)	46	8.9
Others 6)		
Tuberculosis (all forms)	20	
Deaths from all causes	515	3.88

INFANTILE MORTALITY - BIRTH AND STILL BIRTH RATE

Deaths of children under 1 year of age per 1,000 births, and births per 1,000 persons living -

	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Infant Mortality ...	63.7	46.4	75.6	47.0	36.22	60.6	27.6	23.2	35.06	40.1
Birth Rate ...	20.1	22.0	23.9	22.2	23.49	23.1	20.8	18.16	15.2	16.54
Stillbirth Rate per 1,000 Total Births (Live and Still).	32	21	18	32	20	24	22	23	19.4	28.2

CAUSES OF DEATH IN CHILDREN UNDER 1 YEAR OF AGE

Cause	Neo-Natal Deaths						Deaths over 4 weeks				
	Under 24 hrs.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total under 1 Year.
Premature Birth...	7	4	1			12					12
Injury at Birth...											
Marasmus Inanition ...											
Malnutrition ...											
Congenital Deformity...	1	2	1	1		5	3	1			9
Pneumonia ...		1	1			2		1			3
Bronchitis ...											
Gastro enteritis ...							3	1			4
Other Causes ...								1			1
Total...	8	7	3	1		19	6	4		-	29

CHILD MORTALITY

	1949	1950	1951
Number of Deaths of Children aged 1 to 5 years ...	5	5	7

NEO-NATAL MORTALITY

Total Deaths under 1 month of age	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19	(1950 - 16)
Death Rate of children under 1 month of age per 1,000 births	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26.3	(1950 - 24.3)

DISTRIBUTION OF DEATHS IN WARDS

St. Margaret's	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	75
St. Peter's...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	78
Troy Town	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	47
St. Nicholas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	79
Strood	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	114
Temple	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45
Frindsbury	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	77

B. GENERAL PROVISIONS OF HEALTH SERVICES IN THE AREA

1. MEDICAL PRACTITIONERS

There are 19 doctors resident in the area (excluding St. Bartholomew's Hospital) who are engaged in private practice.

2. LABORATORY FACILITIES

The following Table shows the number of specimens submitted to Kent County Laboratory, County Hall, Maidstone, for examination and results.

		Positive	Negative	Total
Swabs	Diphtheria Bacilli...	—	44	44
	Haemolytic Streptococci...	4	169	173
Sputum	Tubercle Bacilli:-			
	Tuberculosis Officer...	65	150	215
	Private Practitioners...	4	59	63
Fæces	Dysentery, Typhoid Group, Food Poisoning, etc.	113	387	500
Food stuffs.	Food Poisoning			13
Ice Cream	...			87
Milk	Bacteriological Examinations			180
Milk -	Biological Examinations			9
Water -	Bacteriological Examinations			95
Blood Counts	...			470
Miscellaneous Examinations	...			163

In addition a few specimens from medical practitioners are dealt with in the Pathological Department of St. Bartholomew's Hospital, Rochester.

3. AMBULANCE FACILITIES

Depot, King Edward Road, Rochester. Telephone Chatham 3540.

4. NURSING IN THE HOME

In addition to the nursing services provided by Kent County Council, nursing in-

the home is provided by the Watts's District Nursing Service, The Almshouses, Maidstone Road, Rochester, (Telephone Chatham 2335).

The number of patients visited during the year by Watts's Nurses was 75 and the total number of visits 12 892.

5. MIDWIFERY SERVICE

There are five County midwives and two independent midwives serving the Rochester area.

6. DOMESTIC HELP SERVICE

District Office, 13 Gun Lane, Strood. Telephone Chatham 7451.

7. HOSPITALS

St. William's Hospital. Telephone Chatham 3243

St. Bartholomew's Hospital. Telephone Chatham 4278

CLINICS AND TREATMENT CENTRES

Clinic	Situation	By whom provided
Ante Natal	Strood Institution on Thursday mornings) and Friday afternoons)	
	St. William's Hospital on Monday after) noons)	
Infant Welfare	St. William's Hospital on Thursday after-) noons)	
" "	Strood Institution on Tuesday afternoons) and Friday mornings)	
" "	Belsey Hall, Rochester on Tuesday after) noons)	
Women's Welfare	St. William's Hospital on 2nd 3rd and) 5th Thursdays 1st and 4th Wednesdays.) By appointment.)	Kent County Council
Diphtheria Immunisation	Strood Institution I.W. Clinic on 1st) Tuesday in the month.)	
" "	St. William's Hospital on 1st Tuesday) morning each month)	
" "	School Clinic Rochester on Tuesday) afternoons.)	
Whooping Cough	School Clinic Rochester on 2nd Friday)	
Vaccination	afternoon in each month)	
Vaccination	St. William's Hospital on 1st Tuesday) morning each month)	
Chest Clinic	13, New Road Rochester)	
Venereal Diseases	36 New Road Rochester)	
Orthopaedic Radium)		
and X ray Ultra)		
Violet Light, Ear)	St. Bartholomew's Hospital, Rochester.)	S. E. Metropolitan Regional Hospital Board
Nose and Throat)		
Ophthalmic Skin)		
Diseases Paediatrics)		

NURSING HOMES

REGISTRATION OF NURSING HOMES.

There are two registered nursing homes, one with four maternity beds and one with nine maternity beds and nine beds for general cases. The Homes are visited regularly by the Medical Officer of Health.

The number of maternity cases admitted during the year was 128 of which 53 were Rochester residents. The number of general cases was 53 of which 13 were Rochester residents.

C. PREVALENCE AND CONTROL OF INFECTIOUS AND OTHER DISEASES

Notifiable Diseases (other than Tuberculosis) 1951.

Disease	Total	Number of Cases in Age Groups					Total Notified in each Locality		No. removed to Hospital	Deaths
		0-5	5-15	15-45	45-65	65+	South	North		
Scarlet Fever ...	101	25	70	6	-	-	67	34	11	-
Pneumonia ...	68	16	12	14	19	7	49	19	2	10
Whooping Cough ...	396	247	142	7	-	-	211	185	3	2
Measles ...	1108	520	565	23	-	-	731	377	11	-
Erysipelas ...	6	-	2	-	2	2	3	3	-	-
Dysentery ...	28	5	18	5	-	-	28	-	1	-
Poliomyelitis (Paralytic) ...	3	2	-	1	-	-	1	2	3	-
Paratyphoid B. ...	1	1	-	-	-	-	-	1	1	-
Food Poisoning ...	16	-	16	-	-	-	16	-	-	-
Total ...	1727	816	825	56	21	9	1106	621	32	12

There was a small outbreak of Food Poisoning in the month of October; there were 16 cases in a school.

Clinically, the condition was of the entero-toxin type of infection but bacteriological examinations of all available remaining food, and of the kitchen staff, were negative. There were no deaths.

The school was served from a central kitchen and on the day of the outbreak 1,439 meals were issued to various schools but no other school was affected. The meal consisted of lamb pie and gravy, potatoes, cabbage, blanc mange and synthetic cream. The blanc mange and synthetic cream were examined with negative results; the other items of food were not available for examination.

NOTIFICATIONS OF INFECTIOUS DISEASE DIVIDED INTO WARDS.

	Frindsbury	Troy Town	St. Peter	St. Margaret	St. Nicholas	Strood	Temple
Food Poisoning ...	-	-	16	-	-	-	-
Scarlet Fever ...	6	2	36	27	2	14	14
Pneumonia ...	4	5	16	19	10	4	10
Dysentery ...	-	2	26	-	-	-	-
Whooping Cough ...	24	41	101	34	35	22	139
Measles ...	79	117	329	178	107	72	226
Erysipelas ...	1	-	1	2	-	-	2
Ac. Poliomyelitis ...	-	-	-	1	-	1	1
Paratyphoid B. ...	-	-	-	-	-	-	1
Pulmonary Tuberculosis	9	2	16	15	9	4	8
Non-Pulmonary Tuberculosis	1	-	1	1	3	1	3
	124	169	542	277	166	118	404

ST. WILLIAM'S HOSPITAL

Table showing Numbers and Types of Admissions.

	Rochester	Chatham	Other Authorities	Total
Scarlet Fever	9	1	6	16
Diphtheria	-	-	-	-
Ac. Poliomyelitis	1 (contact)	-	2	3
Measles	9	4	12	25
Whooping Cough	3	4	3	10
Dysentery	1	-	1	2
Pneumonia	2	-	-	2
Erysipelas	-	-	-	-
Others	9	5	10	24
	34	14	34	82

DIPHTHERIA IMMUNISATION

During the year the following cases have been protected against Diphtheria:-

Under 5 years	421
5 - 14 years	161
Reinforcing dose	857

Total number of children immunised at any time up to 31.12.51.

Year of Birth	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
	521	597	682	555	619	709	640	665	761	515	567	543	482
						1950	1951	Total					
						357	37	8,251					

VACCINATION AGAINST SMALLPOX

The following cases were vaccinated against smallpox during 1951:

Age at 31.12.1951	Under 1	1 - 4	5 - 14	15+	Total
Number vaccinated	200	174	30	61	465
Number re-vaccinated	-	16	28	130	174

SCABIES TREATMENT

The number of cases treated in the last five years are as follows:-

1951	1950	1949	1948	1947
3	2	12	56	48

BUG INFESTATION

38 infested houses were dealt with by D.D.T. during the year.

RATS AND MICE DESTRUCTION ACT

	1951	1950	1949	1948	1947	1946
Total number of rats destroyed...	1373	702	1203	1497	1546	1285
Total number of mice destroyed...	186	372	497	593	273	1522

CANCER

Year	Deaths 1942 - 1951			Death rate per 1,000 persons living
	Male	Female	Total	
1942...	35	32	67	1.9
1943...	26	28	54	1.3
1944...	42	38	80	2.3
1945...	33	25	58	1.6
1946...	36	36	72	1.8
1947...	32	31	63	1.6
1948...	38	21	59	1.4
1949...	36	46	82	1.9
1950...	51	32	83	1.9
1951...	54	29	83	1.9

TREATMENT FACILITIES

Modern facilities are available at St. Bartholomew's Hospital, Rochester, for the treatment of cancer. There is a plant for deep X-ray Therapy and 350 milligrams of radium are in use at the Hospital.

CANCER MORTALITY ACCORDING TO AGE AND SITE

Site	1 - 5		5 - 15		15 - 25		25 - 45		45 - 65		65+		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Stomach	-	2	-	-	-	-	-	-	5	1	9	4	14	7
Lung, Bronchus	-	-	-	-	-	-	1	-	7	-	6	-	14	-
Breast	-	-	-	-	-	-	-	2	-	2	-	2	-	6
Uterus	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Other	-	-	-	-	-	-	1	1	6	6	19	7	26	14

TUBERCULOSIS

NEW CASES AND MORTALITY DURING THE YEAR 1951.

Age	New Cases				Deaths			
	Pulmonary		Non Pulmonary		Pulmonary		Non Pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0- 1	-	-	-	-	-	-	-	-
1- 5	-	-	1	-	-	-	1	1
5-10	2	-	1	1	-	-	-	-
10-15	-	1	1	-	-	-	1	-
15-20	4	1	-	1	-	-	-	-
20-25	9	6	-	1	-	1	-	-
25-35	6	6	1	1	-	3	-	-
35-45	6	7	-	1	2	-	-	-
45-55	9	2	1	-	7	-	-	-
55-65	2	1	-	-	-	-	-	-
65+	1	-	-	-	4	-	-	-
Total	39	24	5	5	13	4	2	1

One case of pulmonary and one case of non-pulmonary tuberculosis were not notified prior to death.

NOTIFICATIONS OF DEATHS WERE DIVIDED AS FOLLOWS:-

					South	North	Totals	
Pulmonary Tuberculosis ...	...	...	...	...	40	23	63
Non-pulmonary Tuberculosis	...	...	...	...	5	5	10
					Pulmonary T.B.		Non-pulmonary T.B.	
					Notified	Died	Notified	Died
Average for the preceding 5 years...	42.4	19.6	10.6	2.4
1951	63	17	10	3

The following information has been kindly supplied by Dr. S. Roy C. Price, the Chest Physician for this District:-

Particulars of the patients from the Rochester District who were dealt with at the Rochester Chest Clinic during 1951:-

New Patients	Pulmonary				Non-pulmonary				Totals			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Defined T.B.	37	24	4	1	4	1	1	-	41	25	5	1
Defined Non-T.B.	-	-	-	-	-	-	-	-	150	179	68	51
	Totals								191	204	73	52

Total attendances — 1,850.

INSTITUTIONS to which patients were sent during 1951.

All Saints' Hospital, Chatham	2
Grove Park Hospital, Lee	8
Farnborough Hospital	3
Lenham Sanatorium	2
Kettlewell Hospital	4
Grosvenor Sanatorium	5
Bevendean Hospital, Brighton	3
St. Alfege's Hospital	1
Royal Sea-bathing Hospital, Margate	1
Eversfield Chest Hospital	2
Orpington Hospital	2
Queen Mary's Hospital, Sidcup	1
St. Bartholomew's Hospital, Rochester	1
Bow Arrow Hospital, Dartford	1
Preston Hall, Aylesford	1
Fairlight Sanatorium, Hastings	1
London Chest Hospital	2
Brook General, Shooter's Hill	1

Total ...41

NOTIFICATIONS AND DEATHS FROM TUBERCULOSIS 1942 - 1951

Year	Pulmonary Tuberculosis			Non-pulmonary Tuberculosis		
	Notifications	Deaths	Death Rate	Notifications	Deaths	Death Rate
1942 ...	35	20	0.6	16	12	0.4
1943 ...	24	25	0.6	9	8	0.2
1944 ...	77	22	0.6	19	6	0.2
1945 ...	51	35	1.0	15	3	0.08
1946 ...	55	23	0.6	8	2	0.05
1947 ...	34	21	0.52	15	2	0.05
1948 ...	27	16	0.38	10	3	0.07
1949 ...	56	30	0.7	10	4	0.09
1950 ...	40	8	0.19	10	1	0.02
1951 ...	63	17	0.39	10	3	0.068

TUBERCULOSIS REGISTER

At the 31st December, 1951, there were 343 cases on the Register.

VENEREAL DISEASES

Sessions are held at the Special Clinic, 36, New Road, Rochester, on Mondays from 1.30 p.m. to 4.30 p.m. and on Thursdays from 10 a.m. to 1 p.m. and on other days by appointment. This information is made known by means of posters and leaflets, through the Public and Port Health Departments, Doctors, Nurses and other Clinics.

The Clinic is conducted by C.D. Routh, Esq., M.D., and serves a considerable area.

NEW PATIENTS. ROCHESTER.	Male	Female	Total
Syphilis	4	4	8
Chancroid... ..	-	-	-
Gonorrhoea	4	2	6
Non-venereal	33	7	40
Total number of new patients from all district served ... ..	...	...	284
Total attendances of Rochester patients... ..	...	...	865
Total attendances of patients from all districts ... ..	...	...	4217

NEW PATIENTS ATTENDING VENEREAL DISEASES CLINIC
AND TOTAL ATTENDANCES FROM (a) ROCHESTER (b) ALL DISTRICTS

1935 - 1951

	1935-1939 Average No. per Annum	1940-1944 Average No. per Annum	1945-1949 Average No. per Annum	1950-1951 Average No. per Annum
1. New Patients				
(a) ROCHESTER				
Diagnosed Venereal Disease ...	43	36	25	15
Diagnosed Non-venereal Disease	27	34	46	46
(b) ALL DISTRICTS SERVED	not available	426	385	296
2. Attendances				
(a) ROCHESTER PATIENTS	2641	1316	1057	913
(b) ALL DISTRICTS SERVED	not available	8481	6021	4549

DISCHARGES FROM ALL DISTRICTS COVERED.

Discharged cured.-

Syphilis	29
Gonorrhoea	25
Non-venereal	191

DEFAULTED BEFORE FINAL TEST OF CURE.

Syphilis	2
Gonorrhoea	12

DEFAULTED BEFORE COMPLETION OF TREATMENT.

Syphilis	19
Gonorrhoea ... ..	..

D. SANITARY CIRCUMSTANCES OF THE AREA

WATER

- (i) The Corporation Water Works for the supply of the Strood area on the North side of the River Medway. The source of this water supply is from wells in the chalk in Strood to which was added, in 1942, an additional supply from deep chalk wells in Cuxton.

Work was commenced on the installation of new borehole and high lift pump at Strood Water Works towards the end of the year.

- (ii) The Chatham and District Water Company which supplies the rest of the City to the South. This supply is drawn from wells in the chalk and greensand.

Both supplies are Chlorinated.

BACTERIOLOGICAL EXAMINATION.

	Rochester Corporation Supply	Chatham & District Supply	Total
Raw Water	25	-	25
Treated Water	19	27	46
	<u>44</u>	<u>27</u>	<u>71</u>

In addition there were 5 chemical analyses of the Rochester Corporation raw water supply.

198 samples of the water supply of Chatham & District were submitted by the Chatham and District Water Company for bacteriological examination, and the results forwarded to the Medical Officer of Health.

The following is a copy of a Report on the chemical analysis of untreated water taken from the Rochester Corporation Supply on 31.12.1951.

Total Solids	...	...	...	...	...	...	...	...	56.3
Chlorine as Chlorides	...	...	...	...	...	...	...	...	7.2
Free Chlorine	...	...	...	...	less than	...	...	...	0.01
Temporary Hardness	...	...	...	...	...	26.0)	...	...	32.8
Permanent Hardness	...	...	...	...	...	6.8)	...	...
Nitrites	...	...	...	...	...	...	...	...	Nil
Nitrates	...	...	...	...	...	...	...	...	0.63
Free and Saline Ammonia	...	...	...	...	...	...	...	...	0.0008
Albuminoid Ammonia	...	...	...	...	...	...	...	...	0.0040
Appearance	...	...	...	...	...	...	...	...	Clear
Sediment	...	...	...	...	...	...	...	...	Nil
Smell	...	...	...	...	...	...	...	...	Nil

The water is supplied direct to all houses.

SWIMMING POOL

During the bathing season the water in the swimming pool is frequently submitted for bacteriological examination. The pool is owned by the Local Authority and the water is chlorinated and filtered continuously. During 1951 sixteen samples were taken

DRAINAGE AND SEWERAGE

During 1951, 84 existing houses were connected to the sewer and the cesspools abolished.

Apart from sewers installed on new Council estates there were no additions or improvements to existing sewers.

PUBLIC CLEANSING

Refuse collection and disposal is under the control of the City Surveyor. Refuse is collected once a week and, at the present time, is dealt with by controlled tipping on Temple Marsh. Salvage (paper) is collected once weekly.

E. CAUSES OF DEATHS IN ROCHESTER

		M.	F.
	All causes	298	217
B1.	Tuberculosis, respiratory	14	4
B2.	Tuberculosis, other forms	1	1
B3.	Syphilis and its sequelae	4	-
B4.	Typhoid fever	-	-
B6.	Dysentery, all forms	-	-
B7.	Scarlet fever & streptococcal sore throat	-	-
B8.	Diphtheria	-	-
B9.	Whooping Cough	1	1
B10.	Meningococcal infections	-	-
B12.	Acute Poliomyelitis	-	-
B14.	Measles	-	-
Rest of B1 - 17.	Other infective and parasitic diseases	-	1
B18. (c)	Malignant neoplasm of stomach (151)	14	7
B18. (f)	Malignant neoplasm of lung, bronchus	14	-
B18. (l)	Leukaemia, aleukaemia (204)	-	1
Rest of B18.	Other malignant and lymphatic neoplasms	26	21
B20.	Diabetes	-	2
B21.	Anaemias	-	-
B22.	Vascular lesions of nervous system	36	27
B26. (a)	Coronary disease, angina	32	15
B28.	Hypertension with heart disease	2	3
B27.	Other heart disease	58	63
B46. (c)	Other circulatory disease	8	8
B30.	Influenza	6	6
B31.	Pneumonia	4	6
B32.	Bronchitis	21	9
B46. (d)	Other diseases of respiratory system	5	1
B33.	Ulcer of stomach and duodenum	2	1
B36.	Gastritis and enteritis	1	4
B38.	Nephritis and nephrosis	3	3
B40. (c)	Pregnancy, childbirth, abortion	-	1
B41.	Congenital Malformations	8	1
Rest of B45 & 46.	Other defined and ill-defined diseases	17	24
BE47.	Motor vehicle accidents	10	3
	All other accidents	3	4
BE49.	Suicide	4	-
B50.	Homicide and other operations of war	-	-
B39.	Hyperplasia of prostate	4	-

Deaths of Infants under 1 year of age:

Total	18	11
Legitimate	18	8
Illegitimate	-	3

Live Births:

Total	371	352
Legitimate	357	335
Illegitimate	14	17

Stillbirths:

Total	10	11
Legitimate	10	10
Illegitimate	-	1

POPULATION 43,700

F. CHIEF SANITARY INSPECTOR'S ANNUAL REPORT, 1951

TO THE MAYOR, ALDERMEN AND COUNCILLORS OF THE CITY OF ROCHESTER,

Your Worship, Madam and Gentlemen

I beg to submit my thirteenth annual report on the sanitary inspection of the City.

COMPLAINTS

1081 complaints were received in the Department during the year as compared with 1189 in 1950.

DEMOLITION ORDERS

The following 10 houses were subjected to Demolition Orders under Section 11, Housing Act 1936, during the year -

3 5 7 9 11 and 13 Corporation Street, Rochester.
22 and 22a Gravel Walk, Rochester.
94 King Street, Rochester.
Yellow Wood House, Broom Hill, Strood.

DEMOLITIONS

17 houses under Housing Act Demolition Orders were demolished during the year:-

1, 3 5 7 9 11 and 13 Corporation Street, Rochester.
6 and 7 Cossack Street, Rochester.
24 and 26 Gravel Walk, Rochester.
8, 12 and 14 Alma Place, Strood.
114 and 116 High Street, Strood.
Yellow Wood House, Broom Hill, Strood.

In addition the following 15 premises were demolished voluntarily by the owners before formal action under the Housing Act was applied:-

1 2 3 4 5 6 7 and 8 Davis Square, Rochester.
1 2, 3 4 5 and 6 Dunstall's Place, Rochester.
10 Alma Place, Strood.

SANITARY IMPROVEMENTS

Repairs and improvements to the total of 3508 were affected under the Inspectors' direction and supervision throughout the year. The details of the various repairs etc. carried out are given in the following list:-

DRAINAGE AND SANITARY FITTINGS

Premises (existing) connected to foul water sewer	84
Drainage entirely reconstructed... ..	43
Drainage partly reconstructed	41
Defective drains repaired	20
Drains unstopped and cleansed	329
New ventilated soil pipes fixed... ..	3
New ventshafts fixed	19
Privies abolished and replaced by W.C.'s	1
Insufficient W.C. accommodation... ..	2
New W.C. apartments built	5
W.C.'s provided with pans and traps	44
Urinals constructed and improved	1
Flushing apparatus and water supply provided to W.C.'s	8
W.C. fittings repaired and cleansed	80
New sinks fixed	9
New lavatory basins and baths fixed	3
Trapped wastepipes fixed	46
Cesspools abolished	77

Water tests applied	266
Smoke tests applied	96

MISCELLANEOUS

No. of houses demolished	32
No. of houses closed	0
Parts of buildings closed	0
Dangerous walls reconstructed and underpinned	3
Roofs repaired	215
Defective brickwork and pointing of brickwork repaired	171
Guttering or downpipes provided or repaired	128
Damp walls remedied	272
Yard Paving repaved or repaired (Repaved 3: repaired 38)	41
Defective floors repaired	134
Defective wall and ceiling plaster repaired	484
Dirty walls cleansed	110
Dirty ceilings cleansed	68
Defective stoves repaired or renewed	93
Defective windows repaired (Woodwork, glazing and sashcords)	392
Ventilation to rooms improved	18
Sub-floor ventilation provided or improved	5
Handrails provided to staircases	8
Ventilated food stores provided or improved	7
Washing coppers provided or repaired	26
Steam outlets provided in scullery wash-houses	8
Sanitary Dustbins provided	356
Instances of overcrowding abated	11
Verminous rooms disinfested	87
Dirty Houses cleansed (Tenant's neglect)	5
Nuisances from animals abated	3
Nuisances from manure and refuse abated	6
Miscellaneous defects remedied	94
Total	<u>3508</u>

NOTICES SERVED

Informal notices issued (written and verbal)	1034
Informal notices complied with	1110
Statutory notices served	187
Statutory notices complied with -	
(a) by owners or occupiers	106
(b) by Local Authority in default of owner or occupier	55

(includes notices served in 1950 and complied with in 1951)

CESSPOOL EMPTYING

2,482 loads were pumped from cesspools in the City as against 2,548 in 1950. Of the total number of loads pumped, 1,569 loads were taken from foul water cesspools.

VERMINOUS DWELLINGS

87 rooms in 38 houses (Corporation houses 11, Requisitioned houses 2, Privately owned houses 25) were subjected to disinfestation treatment for the destruction of vermin. In all cases the premises were treated by thorough spraying with D.D.T.

In addition to the foregoing, action was also taken, in co-operation with the Housing Manager from whom a list of allocations for Council Houses is received each week, to inspect and treat the tenants' furniture before removal where vermin infestation is suspected.

During the year the furniture at 6 households was subjected to disinfestation treatment before removal to the Council Houses concerned.

FOOD INSPECTION

1835 visits were paid by the inspectors to the various premises associated with the sale and production of food. Of this number 700 were visits to the Government Slaughterhouse in the City for the purpose of examining carcasses, etc., at the time of slaughter. The number of carcasses etc. examined during the year was 9,633 as compared with 11,243 in 1950.

The following tabulated statement indicates the kind of carcasses inspected and the number found upon inspection to be diseased or unsound:

	Cattle excluding Cows	Cows	Calves	Sheep and Lambs	Pigs
Number killed	2074	785	2256	4515	3
Number inspected	2074	785	2256	4515	3
ALL DISEASES EXCEPT TUBERCULOSIS					
Whole carcasses condemned	8	6	3	36	0
Carcasses of which some part or organ was condemned	886	241	7	199	1
Percentage of the number in- spected affected with disease other than Tuberculosis	43.10	31.46	0.44	5.22	33.3
TUBERCULOSIS ONLY					
Whole carcasses condemned	12	20	5	0	0
Carcasses of which some part or organ was condemned	213	265	7	0	0
Percentage of the number in- spected affected with Tuber- culosis	10.85	36.30	0.53	0	0

The following table shows the number of carcasses, excluding pigs, inspected in Rochester, together with the percentages of the carcasses found to be affected with Tuberculosis and other diseases or conditions, during the two years prior to 1939 as compared with the figures for 1950/51

	No. of Carcasses Inspected				Percentage of the Carcasses inspected found to be affected with disease							
	Year 1937	Year 1938	Year 1950	Year 1951	Tuberculosis				Diseases other than Tuberculosis			
					Year 1937	Year 1938	Year 1950	Year 1951	Year 1937	Year 1938	Year 1950	Year 1951
Cows	6	9	849	785	55.5	11.1	40.28	36.30	0	11.1	37.22	31.46
Cattle excluding Cows	217	365	1963	2074	8.3	8.8	12.63	10.85	7.8	9.0	42.43	43.10
Calves	88	101	2414	2256	0	0	0.74	0.53	4.5	1.98	0.37	0.44
Sheep and Lambs	8332	12984	6012	4515	0	0	0	0	2.8	2.88	5.30	5.22

The total amount of all foods found to be diseased or unsound during the year weighed 30 tons 8 cwts 3 qtrs 10 lbs. This amount was made up as follows, and the details of the unfit food surrendered are shown below.

Diseased or Unsound Meat
Other Foods

27 tons 16 cwts 1 qtr. 23 lbs.
2 tons 12 cwts 1 qtr. 15 lbs.

FOOD CONDEMNED

26 Carcases, etc. of cows	20 Generalised Tuberculosis, 1 Johne's Disease, 4 Dropsy and Emaciation, 1 Septicaemia.
10 " " " " heifers	5 Generalised Tuberculosis, 2 Dropsy and Emaciation, 3 Septicaemia.
9 " " " " steers	7 Generalised Tuberculosis, 1 Fevered and Ill-bled, 1 Putrefaction.
1 Carcase etc. of a Bull	Johne's Disease.
8 Carcases, etc. of calves	5 Generalised Tuberculosis, 1 Septicaemia, 2 Immaturity.
36 Carcases, etc. of sheep and lambs	28 Dropsy and Emaciation, 2 Fevered and Ill-bled, 5 Septicaemia, 1 Uraemia.
14 Forequarters of cows	Tuberculosis
2 Forequarters of heifers	" "
8 Forequarters of steers	" "
1 Hindquarter of a cow	" "
1 Hindquarter of a heifer	" "
293 Bovine Heads and Tongues	267 Tuberculosis, 25 Actinomycosis, 1 Abscess.
812 Bovine Livers	123 Parasitic 135 Cavernous Angioma, 151 Multiple Abscesses, 61 Tuberculosis, 342 Cirrhosis.
423 Bovine Lungs	406 Tuberculosis, 13 Parasitic, 4 Pleurisy.
94 Cows udders	Putrefaction.
48 Bovine Stomachs, Intestines etc.	46 Tuberculosis, 2 Johne's Disease.
13 Calves' Plucks	11 Tuberculosis, 2 Parasitic.
2 Calves' Livers	Abscesses.
1 Pig's Liver	Cirrhosis.
11 Sheep Plucks	Parasitic.
169 Sheep Livers	" "
9 Ox Hearts	Pericarditis.
571 lbs Beef	305 lbs. Severe Bruising, 125 lbs. Tuberculosis, 50 lbs. Abscesses, 91 lbs. Bone Taint.
66 lbs Mutton	12 lbs. Decomposition, 54 lbs. Severe Bruising.
22 lbs Pork	Decomposition.
4 Sheep's Heads	Mutilation.
141 lbs Bacon	Unsound.
720 tins Baby Food	" "
27 lbs Biscuits (Foreign)	" "
36 lbs Brawn	" "
133 lbs Cheese	" "
4 pkts Dates	" "
56 lbs Dried Fish	" "
1395 Eggs	" "
10 tins Fish Paste	" "
195 tins Fish	" "
19 jars Fruit	" "
605 tins Fruit (various)	" "
37½ lbs Fruit Cake	" "
1649 lbs Ham (tinned)	" "
102 lbs Jellied Veal	" "
105 lbs Luncheon Meat	" "
428 jars Mayonnaise	" "

181 tins Meat	Unsound
1656 tins Milk	
5 jars Pickles	
30 Pork Pies	
16 tins Preserves	
58 pkts. Pudding Mixture	
150½ lbs Rabbit	
26 lbs Sausages	
7 lbs Sausage Meat	
91 tins Soup	
31 lbs Sweet Confectionery	
558 tins Vegetables - various	
304 lbs Wet Fish	
71 pkts. Whipping Compound	

MILK

The inspection and supervision of the production of milk at dairy farms is no longer the responsibility of Local Authorities and since the 1st October, 1949, the Authority responsible is now the Ministry of Agriculture & Fisheries.

The Local Authorities still retain the duties connected with the provisions of milk and Dairies Regulations which apply to dairies other than those at dairy farms, the provisions relating to diseases communicable to man and to the conveyance and distribution of milk in their areas.

The issue of the necessary licences in accordance with the Milk (Special Designation) (Raw Milk) Regulations 1949 and the Milk (Special Designation) (Pasteurised and Sterilized Milk) Regulations 1949 is also the concern of Local Authorities and Food and Drugs Authorities

The following table indicates the number of retail dairies and the number of distributors of milk in the City Area together with the various licences issued by the Council under the Special Designation Regulations

Number of dairies (excluding dairy farms)	4
registered distributors (excluding distributors of sterilized milk only) with premises in the City Area	4
registered distributors (excluding distributors of sterilized milk only, with premises outside the City Area	7
registered distributors of Sterilized Milk only (General shops etc	54
Licences issued	
Tuberculin Tested Milk Dealers Licences	10
Dealers' Supplementary Licences	4
Pasteurised Milk Dealers Pasteurisers' Licences	3
Dealers' Licences	11
Dealers' Supplementary Licences	4
Sterilized Milk Dealers Licences	60

229 visits were paid to the retail dairies and premises selling sterilized milk in the City throughout the year for the purpose of routine inspection and the taking of milk samples.

BACTERIOLOGICAL EXAMINATIONS

Milk

The following samples of milk were taken during the year and submitted to the County Bacteriologist for examination

Tuberculin Tested Milk (Farm Bottled)	13
Non designated Raw Milk	1

1 sample of Tuberculin Tested Milk did not satisfy the prescribed tests under The Milk (Spécial Designation) (Raw Milk) Regulations, 1949.

In addition to the above, 9 samples of milk were taken from local herds, from milk supplied to schools, and from retailers' premises for examination as to the presence of Tubercle Bacillus in the milk.

All the samples showed negative results.

205 samples of Pasteurised and Heat-treated Milk from the 3 licensed dairies in the City area, and from supplies treated outside the area, were sent to the County Bacteriologist and Public Analyst during the year for subjection to the Phosphatase and/or Methylene Blue tests. The results are given below:-

<i>Phosphatase Test</i>	<i>Methylene Blue Test</i>	<i>Turbidity Test</i>
188 samples passed 1 sample failed	166 samples passed 5 samples failed	16 samples passed 0 samples failed

Water

76 samples of drinking water and 18 of swimming bath water were submitted for bacteriological and chemical analysis during the year. Fuller details in connection with the water supplies will be found in the report of the Medical Officer of Health.

ICE-CREAM

During the year 21 vendors were registered under the Rochester Corporation Act, 1936 for the storage and sale of ice-cream in the City Area. The total number of premises and/or vendors registered is 146.

All supplies of ice-cream sold in the City are, with one exception, manufactured in other areas.

The premises for the manufacture of ice-cream were constructed by a vendor in the City Area during the year. The business is carried on in a very satisfactory manner and all samples taken, both for bacteriological examination and chemical analysis, have proved to be up to standard.

78 samples of ice-cream were submitted to the County Laboratory for bacteriological examination and the results of the same are as follows:-

Grade I	... 55 samples
Grade II	... 18 samples
Grade III	... 2 samples
Grade IV	... 3 samples

In addition 36 samples of ice-cream were submitted to the Public Analyst for chemical analysis and the details relating to these are given on page 23.

OTHER SPECIMENS

The following specimens were also submitted to the County Bacteriologist for bacteriological examination during the year:-

Cooked Ham	Biscuits	Lemonade
Corned Beef	Potato Powder	Glands of Heifer
Potato Chips	Crabmeat	Spleen of Cow

FOOD AND DRUGS SAMPLING 1951

192 samples of milk and other foods were taken and submitted to the Public Analyst for chemical analysis during the year.

The details relating to the kinds of foods sampled, the results of the analyses made and the action taken with regard to the samples reported as being either inferior or adulterated are shown in the following tables -

Article	No.	Genuine	Adulterated or Deteriorated
Advocaat...	1	1	
Aspirin Tablets	1	1	
Baking Powder	1	1	
Beef Sausage Meat	4	4	
Beef Suet	1		1
Beans in Tomato Sauce	1	1	
Biscuits	2	1	1
Brandy Snap	1		1
Butter	1	1	
Cheese (Processed Gruyere)	1		1
Coffee (Ground)	1	1	
Corned Beef	3	2	1
Cream (Double)	3	3	
Curry Powder	1	1	
Doughnuts	1	1	
Fish Paste	3	3	
Fish (Tinned - Sardines etc)	8	7	1
Fruit (Tinned - Plums & Cherries)	2	1	1
Flour Mixture (Sponge & Cakes)	2	2	
Ham	1		1
Ice Cream	36	30	6
Jam (Plum & Raspberry)	2	1	1
Jelly Crystals	1		1
Milk	101	101	
Oil (Frying)	1	1	
Peas (Processed)	1	1	
Potato Chips	1	1	
Potato Crisps	1	1	
Potato Powder	1	1	
Pepper Compound	1	1	
Pepper (White)	1	1	
Salad Cream	1	1	
Saccharin	1	1	
Spice (Mixed)	1	1	
Sweet Confectionery	2	1	1
Vinegar	1	1	
Totals	192	175	17

Sample No.	Article	Result of Analysis	Action taken
3	Corned Beef	The meat whilst fit for human consumption revealed small superficial areas of high tin concentration.	Stocks surrendered and matter reported to Ministry of Food
29	Brandy Snap	Contained slightly caramelised sugars only	Matter referred to the Food Standards & Labelling Division. Ministry of Food.

Sample No.	Article	Result of Analysis	Action Taken
41	Ice-Cream	Deficient in non-fatty solids.	Informal sample - formal check sample satisfactory. Representation made to manufacturers of Sample No. 41.
43	Ice-Cream	Deficient in non-fatty solids.	Informal sample - formal check sample satisfactory. Representation made to manufacturer of Sample No. 43.
56	Ice-Cream	Slightly deficient in sugars.	Verbal warning to vendor and manufacturers.
117	Smoked Sild	High concentration of tin.	Stocks surrendered for destruction.
121	Plums, (Tinned)	The tin showed marked hydrogen swell.	Remainder of stocks examined and found to be satisfactory.
122	Sweet Confectionery	Coconut rancid in sample.	Whole of stocks surrendered for destruction.
123	Biscuits	Biscuits unfit for human consumption due to rancidity of fat.	Stocks surrendered and used for animal feeding.
125	Shredded Suet	Rancid and unfit for human consumption.	Stocks surrendered for destruction.
126	Jelly Crystals	Crystals partially liquified.	Stocks surrendered for destruction.
127	Cheese, Processed	Abnormal putrefaction	Stocks surrendered for destruction.
137	Jam (Plum)	Contained 510 parts per million of zinc.	Home-made jam, made in a galvanised container. Complainant requested to destroy whole of the stock
146	Ice-Cream	Deficient in milk solids other than fat.	Informal sample - See Sample No. 155.
151	Ice-Cream	Deficient in milk solids other than fat.	Informal sample - See Sample No. 155.
154	Ham	Contained pre-cooking taint.	Remainder of stock surrendered for destruction.
155	Ice-Cream	Deficient in milk solids other than fat to the extent of at least 40%.	Proceedings to be instituted against manufacturers.

ICE-CREAM.

On the 1st March, 1951 the following standard became law under the Food Standards (Ice-Cream) Order, 1951 made by the Ministry of Food:

"Ice-cream shall contain not less than 5 per cent fat, 10 per cent sugar and 7½ per cent milk solids other than fat."

There are two provisos to this standard relating to ice-cream containing fruit and to 'Parev' (Kosher Ice Cream), the standard for the latter being not less than 10 per cent fat and not less than 14 per cent sugar.

The results of the analyses of 36 samples submitted to the Public Analyst during the year are as follows -

FAT.

6-7%	7-8%	8-9%	9-10%	10-11%	11-12%	12-13%	13% and over	
2	4	5	9	7	3	2	3	
								Total: 36 samples

NON FATTY SOLIDS.

10-15%	15-20%	20-25%	25-30%	30-35%	35% and over	
1	6	20	8	-	1	
						Total: 36 samples

FACTORIES AND WORK PLACES

251 visits were paid by the Sanitary Inspectors to the factories and work-places in the City during the year. The number of defects found at the premises visited was 21.

I desire to record my appreciation for the help and co-operation given at all times by H M. Factory Inspector and her Staff who are responsible for the welfare of the workers at factories where mechanical power is used.

FACTORIES ACTS 1937 and 1948

1. INSPECTIONS FOR PURPOSES OF PROVISIONS AS TO HEALTH (INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS).

Premises	Number on Register	Number of		
		Inspections	Written Notices	Occupiers prosecuted
(i) Factories in which Sections 1 2 3 4 and 6 are to be enforced by Local Authorities	64	59	-	-
(ii) Factories not included in (i) in which Section 7 is enforced by the Local Authority	166	191	10	-
(iii) Other Premises in which Section 7 is enforced by the Local Authority (excluding out workers premises)	1	1	-	-
Total	231	251	10	-

2. CASES IN WHICH DEFECTS WERE FOUND.

Particulars	Number of cases in which defects were found				Number of cases in which prosecutions were instituted
	Found	Remedied	To H.M. Inspector	By H.M. Inspector	
Want of cleanliness (S.1)	11	8	-	-	-
Overcrowding (S.2)	-	-	-	-	-
Unreasonable temperature (S.3)	-	-	-	-	-
Inadequate ventilation (S.4)	-	-	-	-	-
Ineffective drainage of floors (S.6)	-	-	-	-	-
Sanitary conveniences (S.7)					
(a) Insufficient	4	4	-	-	-
(b) Unsuitable or defective	1	-	-	-	-
(c) Not separate for sexes	-	-	-	1	-
Other offences against the Act (Not including offences relating to Outwork)	5	4	-	-	-
Total...	21	*16	-	1	-

*Includes defects remedied in 1951 following inspection and action in 1950.

3. OUTWORK

Nature of Work	Section 110			Section 111		
	No. of outworkers in August list required by Sect 110 (1) (c)	No. of cases of default in sending lists to the Council	No. of prosecutions for failure to supply lists	No. of instances of work in unwholesome premises	Notices served	Prosecutions
(Making etc. Wearing (Apparel (Cleansing (& washing	30	-	-	-	-	-
	-	-	-	-	-	-
Total...	30	-	-	-	-	-

DISINFECTION

144 rooms were disinfected by formaldehyde fumigation after infectious disease. This number includes 54 rooms disinfected after removal or deaths of cases of Tuberculosis.

33 loads of bedding were removed from premises for the purpose of steam disinfection or destruction, as against 28 in 1950.

RAG FLOCK AND OTHER FILLING MATERIALS ACT, 1951.

The above-mentioned Act to secure the use of clean filling materials in upholstered articles which are stuffed or lined, together with the Regulations made under the Act, came into force on the 1st November, 1951.

There are no manufacturers or storers of rag flock in the City.

The number of firms of upholsterers in the area affected by the Act is 2 and these have been duly registered by the Council.

PET ANIMALS ACT, 1951.

This Act to regulate the sale of pet animals became law on the 22nd June, 1951, the date of operation being the 1st April, 1952.

Number of Licences granted to keep a Pet Shop 2

RODENT CONTROL

Total number of premises, lands, etc. inspected and treated during the year	369
Number of sewer manholes baited (test baiting and poison baiting)	360
Estimated number of rats killed (Ministry of Food formula)	1093
Actual bodies recovered	1373
MICE: Number of mice destroyed (Actual bodies recovered)	186

In addition to the rodent control operations carried out following complaints and routine inspections of premises, two maintenance treatments of the sewers were carried out during the year. Of the 360 sewer manholes baited 37 revealed the presence of rats.

The necessary poison treatment was applied to the sewers in the areas found to be affected.

SUMMARY OF INSPECTIONS

Primary Inspections (Public Health Act and Housing Act)	849
House-to-House Inspections (Clearance Area action)	9
Visits to Unfit and Sub-standard Houses (Population, rent etc. survey)	122
Re-inspections	1804
Drainage surveys and visits to work in progress	1429
Caravans inspected	22
Visits to Factories and Work-places	251
" " Bakehouses	20
" " Slaughterhouses	700
" " Ice-Cream premises	130
" " Food preparing premises (Canteens, etc)	356
" " Dairies and Milk Shops	98
" " Fried Fish Shops	33
" " Other Food premises (shops, etc)	357
" " Stables and mews	6
" " Cases of Infectious Disease	308
" " for food sampling and testing	815
" " water sampling	102
Overcrowding investigations	70
Market stalls inspections	141
Shops Acts inspections	58
Atmospheric Pollution (Visits to gauge sites etc.)	16
Smoke observations	4
Visits in connection with Rag Flock etc. Act, 1951	19

Visits in connection with Dustbins	...	...	...	...	...	1219
Visits in connection with Rodent Control (primary and treatment, etc)	...	...	...	...	...	1693
Miscellaneous visits and inspections	...	...	...	...	...	1826
Total						<u>12457</u>

In conclusion I beg to express my gratitude to the Chairman and Members of the Health Committee and to Dr. Murray for the support and guidance I have received throughout the year. To the Staff of the Department I wish to record my thanks and appreciation for their assistance.

I am also indebted to the Officers in other Departments for their assistance and co-operation during the year.

I am, Madam and Gentlemen,

Your obedient servant,

E. W. BARTON,

Chief Sanitary Inspector.

G PORT OF ROCHESTER

ANNUAL REPORT OF THE PORT MEDICAL OFFICER FOR 1951

I. Amount of Shipping entering the Port during the year.

TABLE A.

Type	Number	Tonnage	Number inspected by the M.O.	Number inspected by the P.H.I.	Number reported to be defective.	Number of vessels on which defects were remedied	Number on which defects were found and reported to Ministry of Transport Surveyors.	Number reported as having had infectious disease aboard during voyage.
Foreign								
Steam	138	162432	6	122	25	24	1	-
Motor	126	53760	1	107	14	13	-	-
Sail	-	-	-	-	-	-	-	-
Fishing	-	-	-	-	-	-	-	-
Total	264	216192	7	229	39	37	1	-
Coastwise								
Steam	183	181733	-	132	33	31	1	-
Motor	349	56785	-	321	23	23	-	-
Sail	17	1067	-	14	1	1	-	-
Fishing	-	-	-	-	-	-	-	-
Total	549	239585	-	467	57	55	1	-
Total Foreign & Coastwise	813	455777	7	696	96	92	2	-

The above do not include 160 river and estuarial craft inspected.

TABLE B.

II. Character of Trade of Port.

(a) PASSENGER TRAFFIC DURING 1951.

The passenger traffic of the Port is confined entirely to day trips between this Port and other British seaside resorts.

(b) CARGO TRAFFIC.

Principal Imports. Wood pulp, coal, timber, china clay, stone, gypsum, crude oil, fertilisers, grain, cattle food, seeds and kernels for making cattle cake, maize, potatoes and flour.

Principal Exports. Cement, cattle cake, vegetable oil, plaster boards and scrap iron.

(c) COUNTRIES WITH WHICH THE PORT PRINCIPALLY TRADES.

Scandinavia, Holland, Germany, Belgium, Canada, South America, West Africa, and the Mediterranean Ports.

The principal British Ports with which trade is carried on are:-

London, Tyne Ports, Middlesbrough, Hartlepool, Blythe, Keadby, Goole, Seaham Harbour, Ipswich, the Scottish East Coast Stone and Coal Ports, the Cornish Stone and China Clay Ports.

Vessels arrive in ballast from many British Ports to load cargoes of cement.

NUMBER AND NATIONALITY OF VESSELS

British ...	468	Dutch ...	86	Finnish ...	40
Swedish ...	31	Danish ...	22	Norwegian...	37
Canadian ...	1	Icelandic.	2	Panamanian..	4
German ...	3	Russian...	1	Italian ...	1

III. Source of Water Supply.

1. (a) FOR THE PORT.

There are two sources. The South side of the River is supplied by the Chatham and District Water Company, the North side by the Strood Water Works which is the property of the Rochester Corporation.

(b) FOR SHIPPING.

The supply is from the same sources.

2. HYDRANTS AND HOSEPIPES. PRECAUTIONS AGAINST CONTAMINATION.

The majority of filling points are standpipes and taps. At the few points where hydrants are in use, the system of drainable concrete pits and porous pits renders direct contamination unlikely. The necessity for washing the connections before coupling up the hoses has been pointed out to the people concerned. It is the usual practice to take the supply of boiler water before filling the drinking water tanks and this ensures that the hoses are well flushed before the supply of drinking water is taken aboard.

3. NUMBER OF WATER BOATS AND THEIR SANITARY CONDITION.

There is one boat for supplying shipping. This vessel is of iron and the two tanks, capable of holding some forty tons of water, do not form part of the hull but are separate constructions and may be lifted out of the craft whilst she undergoes her periodic overhaul and the painting of the bilges. During service the tanks are kept sealed, the power pump supplied for discharging the water being fitted to a permanent intake pipe and not through an uncovered manhole. When taking in her cargo of water the vessel is placed alongside a pier along which a permanent water pipe carries the water from the Town supply. This pipe is connected to the boat's tanks and the water flows in without contamination by dust and dirt. The tanks are cleaned out and cement washed at regular intervals. In order to render the work and subsequent inspection efficient, electric cables are carried along the pier so that electric lighting is provided by wandering lead inside the boat's tanks.

IV. Port Health Regulations and Port Health Amendment Regulations, 1945.

See pages 30, 31 and 32 of my Annual Report for 1945.

TABLE C.

CASES OF INFECTIOUS SICKNESS LANDED FROM VESSELS.

Disease	No. of cases during the year		No. of Vessels concerned	Average number of Cases for previous 5 years
	Passengers	Crew		
Nil	Nil	Nil	Nil	Less than 1

TABLE D.

CASES OF INFECTIOUS DISEASE OCCURRING ON VESSELS DURING THE VOYAGE BUT DISPOSED OF PRIOR TO ARRIVAL

Nil

V. Measures against Rodents.

1. STEPS TAKEN FOR THE DETECTION OF RODENT PLAGUE.

(a) SHIPS IN THE PORT. The query as to the presence of rats on board is made to the Master or Officer-in-Charge on all vessels, by the Port Health Inspector when boarding.

Deratisation certificates are examined in the case of vessels carrying such certificates and the crews are questioned as to the presence of rats in or about their quarters, and store rooms and other possible harbourages are examined for rat traces.

Due regard is given to the trade in which the vessel is engaged and it is a routine measure to attempt to obtain specimens of rats, for bacteriological examination, in the case of ships from places where plague is endemic.

Foremen stevedores have been made aware of the significance of finding numbers of dead rats and have been requested to report the matter without delay.

Attention is given to small rivercraft such as barges, etc., which, either regularly or periodically, take on cargoes direct from ocean going vessels from tropical ports and the Masters are informed of the possibility of rats from such vessels being taken on board with the cargo. The Masters of such craft are asked to keep, where this may be practicable, any rats which they may catch on board so that they may be subjected to bacteriological examination.

(b) QUAYS, WHARVES, WAREHOUSES, ETC. These places are examined from time to time in order to discover infestation. They are included in the block control carried out by the Rodent Officer for the City who spends part of his time, as necessary, in the Port.

The principal warehouses and mills carry out a routine rat service either by men detailed by the owners for this duty or by rat servicing firms.

In addition to rats trapped on board vessels from suspected ports, specimens from the near vicinity of the Port are sent for bacteriological examination as a matter of routine.

2. MEASURES TAKEN TO PREVENT THE PASSAGE OF RATS FROM SHIP TO SHORE.

Except in special circumstances no measures are taken to prevent the passage of rats from ship to shore.

The larger vessels from tropical ports discharge their cargoes into lighters, etc., while moored out in the stream and the usual precautions such as beams, lighted and painted gangways are impracticable. In the majority of cases access to the ship is by rope ladder which is hung clear of the craft alongside.

3. METHODS OF DERATISATION.

(a) Rochester is not an authorised Port for the issue of Deratisation Certificates but where these are required arrangements have been made under Article 4 of the Port Health Regulations, for them to be supplied by the Port of London Authority.

Where deratisation is necessary traps, sulphur dioxide, varnish boards and poisons are the methods used by the Port staff. Fumigation by H.C.N. is carried out by firms specialising in this type of fumigation.

(b) On premises in the vicinity of the Docks and Quays, trapping and poisoning are the methods chiefly used.

4. MEASURES TAKEN FOR THE DETECTION OF RAT PREVALENCE IN SHIPS AND ASHORE.

SHIPS. Enquiry is made of officers and crew. The usual rat traces, droppings,

gnawed woodwork body smears on paint and small openings affording passage, etc., are looked for, particularly in store rooms. In practice it is found that crews complain of the presence of rats without any leading questions.

Cargo workers are questioned as to rats or rat traces they may have seen while working the cargo. When a vessel is under observation, holds, lifeboats, etc., are inspected for rat traces.

ASHORE. Buildings are examined for the usual rat traces and evidence of gnawed sacks and traces of feet or tails in dust, etc.

5. RAT PROOFING.

New buildings are built on rat proof lines. Old buildings are not and, where possible, efforts have been made to improve them by zinc lined grain rooms and expanded metal to openings where practicable.

6. RODENT CONTROL CERTIFICATES ISSUED - 17.

7. BARGES FUMIGATED - 2. MICE RECOVERED - 2.

RATS DESTROYED DURING 1951

TABLE E.

ON VESSELS

Number of rats 4

TABLE F.

IN DOCKS, QUAYS, QHARVES AND WAREHOUSES

Number of Rats

Brown	3)
Black	11)
Species not recorded ...	-)
Estimated killed by warehouse and wharf owners	620
Bacteriologically examined	14.

Dealt with by Rodent Officer.

TABLE G.

MEASURES OF RAT DESTRUCTION ON PLAGUE "INFECTED" OR "SUSPECTED" VESSELS; OR VESSELS FROM PLAGUE INFECTED PORTS ARRIVING IN THE PORT DURING THE YEAR.

One vessel arrived from Japan via Kobe, Colombo, Port Said and Antwerp, on a Sunday afternoon and, following information from Sheerness where the vessel was passed up under partial pratique, she was met on arrival at Rochester by the Port Medical Officer and Port Inspector. She was given full pratique after examination.

TABLE H.

DERATISATION AND DERATISATION EXEMPTION CERTIFICATES.

During the year 14 Deratisation Exemption Certificates were issued through the London Port Health Authority.

VI. Hygiene of Crew Space.

TABLE I.

Nationality of Vessel	No. inspected	Defects of original construction	Structural defects through wear and tear	Dirt, Vermin and other conditions prejudicial to health.
British	468	6	15	47
Others	228	-	10	25

VII. Food Inspection.

1. Action taken under the Public Health (Imported Food) Regulations, 1937; the Public Health (Imported Milk) Regulations, 1926; the Public Health (Preservatives, etc., in Food) Regulations, 1925-1940 and the Food and Drugs Act, 1938 (Section 39).

Cargoes of flour, wheat, barley and maize to the total of 125 were examined. The cargoes were in good condition with the exception of half a ton of wheat, damaged by bilge water, which was disposed of by the Salvage Division of the Ministry.

2. SHELLFISH.

Periwinkles only are taken from the River Medway. Collection of mussels, cockles and oysters is controlled by the Medway Shellfish Regulations, 1936, which require them to be relaid in approved waters or passed through a cleansing plant.

Mussels are not gathered owing to the expense involved in cleansing or relaying. However, as a check on the actual condition of mussels existing in the River a sample was taken and submitted for bacteriological examination. Evidence of faecal contamination was present but no pathogenic organisms were found.

No cockles exist in numbers sufficient to be a commercial proposition.

Oysters are relaid at Brightlingsea or sent to the Brightlingsea Cleansing Plant for sterilisation.

THE LAYINGS FROM WHICH SHELLFISH (SPECIFYING THE KINDS OF SHELLFISH WHICH MAY BE MARKETING IN THE DISTRICT) ARE DERIVED.

Sources of local supply of Oysters and Mussels are Whitstable and Billingsgate Market. No shellfish are imported from Overseas or British Ports.

VIII. Other Information.

Dangerous Infectious Disease (Smallpox, Typhus, Cholera, Yellow Fever, Plague).
Arrangements for Hospital Treatment

DISEASE	HOSPITAL
Smallpox	Long Reach Hospital, Dartford. Tel. Dartford 3231
Typhus Fever	St. Ann's General Hospital, St. Ann's Road, Tottenham, N. 15. Tel. Stamford Hill 1144.
Cholera, Yellow Fever and Plague	Any Local Infectious Disease Hospital (or E.M.S. Bed Service. Tel. Monarch 3000.)

AMBULANCE SERVICE for Dangerous infectious disease is provided by the London County Council. Tel. Waterloo 3311.

CANAL BOATS

There are no canal boats operating within the boundary of the Port. Shallow draft motor coasters with their lowering masts, motor barges and lighters can proceed many miles above Rochester Bridge and these vessels now handle the trade once carried by canal boats.

PROVISION FOR CLEANSING AND DISINFECTING VERMINOUS PERSONS

The cleansing station at St. William's Hospital is at the disposal of the Port for the treatment of verminous persons and the steam disinfector at the same hospital is available for the disinfection of clothing.

CASES OF SICKNESS

Sprained ankle	1	Jaundice	1	Burns	1	Bruised Ribs	1
Scabies	1	Flu	1	Fibrositis	1		
Dental Abscess	2	Hypopoesia	1	Pleurisy	1		

RIVER SAMPLES.

Twelve samples of river water were submitted for bacteriological examination which showed evidence of faecal contamination but no pathogenic organisms were cultivated.

SCORPIONS.

The master of a small river barge reported that his mate had awakened in his bunk to find a small scorpion on his face.

He stated that about one month previously the craft had carried a cargo of bones, the origin of which was said to have been Egypt. During the discharge of this cargo a large scorpion had been killed. The fact that a month later another, smaller scorpion had been found led the master to suspect that there were more on board.

The barge had a full cargo on board which she was discharging in the London River and, as the only practicable course was a complete fumigation, information was telephoned to the London Port Health Authority. On arrival in the London River, after discharging her cargo, the barge was fumigated with H.C.N. No more scorpions were found.

MOSQUITOES

Anti-mosquito measures have been carried out on the local marshes under the direction of the Port Health Inspector. Numerous pools and permanent collections of water have been treated where necessary and practicable. The spraying with D.D.T. has reduced the mosquito nuisance to negligible proportions.

PSITTACOSIS REGULATIONS

One parrot landed under permission of the Ministry of Health, and one prohibited from landing.

PORT FISHERY

The duties of the Port Fishery Officer, introduced by the Ministry of Agriculture and Fisheries as a war-time measure, are still being carried out by the Port Health Inspector.

Details of the duties are given in the Report for 1946.

INTRODUCTION

Many excellent histories have been written about the racial and political emergence of the Medway from the barbaric age of prehistoric times. I have made full use of such records, some ancient, others more modern; and have appended a list of these documents without which this attempt to portray the life, work and afflictions of the Port of Rochester would not have been possible.

In my endeavour to elicit specific information about the Port, I have been struck by the lack of historical references to it as compared with the great attention which historians have paid to the City, towns and hamlets on its banks.

It is clear that, originally, the prosperity and progress of the community was entirely dependent on the River and on the local naval and ship-building establishments which originated in the days of the Tudor monarchies. Prior to this, Rochester Castle and many other fortifications on its banks indicate that the Port was of extreme martial importance.

From earliest times the River had an important fishing industry which has, unfortunately, disappeared on account of increased shipping traffic and river pollution; but it was on this industry and agriculture that the majority of the local inhabitants were dependent at one time.

Private industrial undertakings in the district began to be developed when it was discovered that the local chalk subsoil and the alluvial deposits in the river could produce cement, and several cement factories were built about a hundred years ago. Engineering, paper, petroleum and aeronautical works soon followed with the result that, in the past century, there has been a transformation of a fishing and agricultural community to an industrial one, but it is H.M. Establishments which have made the Port important.

The Port of London, the Medway's large brother, being overcrowded, the Port of Rochester lies wide open to take the overflow when capital is available for its developments.

In collecting information on the subject I have had considerable help from many others who are more informed on historical matters and to whom I would like to express my appreciation. Mr. J.H. Evans has given me the most valuable and, let me admit, most corrective information about the prehistoric period. To the Librarians Mr. R.J. Marsh, Rochester; Mr. G.S.D. Lindsay, Chatham; Mr. N. Tomlinson, Gillingham; Mr. Ferrier, librarian, Registrar-General's Office; Aldermen James Presnail of Chatham and Mr. A.C. Holliday, official Guide to the City, I am very much indebted. I have also had the privilege of consulting documents in the British Museum, whose secretariat has been most helpful. For the information with regard to factories I wish to thank the Chief Sanitary Inspectors of the various local Authorities:- Mr. D.E. Jacob, Sheerness U.D., Mr. W.F. Dodds, Queenborough M.B., Mr. H.C. Coldrick, Malling R.D., and Mr. E.W. Barton, Mr. T. Howard and Mr. F. Hedgecock of Rochester, Chatham and Gillingham respectively.

I have tried to make the tale as accurate and informative as possible. No doubt I have made mistakes but, I hope I have cast a little light not only on the social progress but on some of the public health problems associated with war and other human afflictions which have hit the local community in the past. That was the intention.

Health Department,
ROCHESTER.

May, 1952.



A PLAN of
the CITY of
ROCHESTER
from the Bridge, to the
Victualling Office
F. Baker, Surveyor.

- | | | | | |
|------------------------------|---------------------------|-------------------------|------------------------|-------------------------|
| A. The Victualling Office. | H. The Presbyterian Meet. | P. The College Gate. | X. The Crown Inn. | ...The ancient Walls of |
| B. Mr. Wesley's Chapel. | I. Mr. Watt's Alms Houses | Q. St. Nicholas Church. | Y. St. Clements Lane | the City and Castle. |
| C. The Steel Manufactory. | K. The Customs House. | R. The Deanery. | Z. The Bridge Chapel. | d The Ruins of the |
| D. St. Catherine's Hospital. | L. The Work House. | S. The Cathedral. | | Fire in 1768. |
| E. The Water Works | M. The Quaker Meeting | T. The Tower. | | |
| F. Crow Lane. | N. The Clock House. | V. The Town Hall. | a. The Town Key. | |
| G. The Free School. | O. The Kings Head Inn. | W. The Bull Inn. | b. The Tide Mill. | |
| | | | c. The Grammar School. | |

THE MARTIAL, MEDICAL AND SOCIAL HISTORY OF THE PORT OF ROCHESTER

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THE MARTIAL, MEDICAL, SOCIAL HISTORY

OF THE PORT OF ROCHESTER

THE ANCIENT INHABITANTS ON THE MEDWAY. (SAXON-MEDWAEG: MEDIAEVEL-MEDEWEYE)

The Medway Valley is full of past history which has long since faded from the minds of men and of which no record remains. At one time it was inhabited by Stone Age man and by prehistoric animals. This we do know as the remains of a straight tusked elephant (*Elephas Antiquus*) of the Palaeolithic period were discovered at Upnor (opposite Chatham Dockyard) some time ago. The skeleton of this unique 15 feet high elephant has been restored and was preserved in the Natural History Museum. (4) The district was thickly populated by Palaeolithic man as evidenced by the abundance of typical stone implements (worked flints) found at Ham Hill (Snodland) Cuxton, Halling and Gillingham, and the discovery of the skeleton of a Palaeolithic man at Halling in 1914 associated with flint tools. (J.H. Evans)

The Megalithic Burial Chambers and barrows of the dead, one of which survives in the monument known as Kit's Coty House (a) about four miles from Rochester on the way to Maidstone, are the necropolis of a vanished race, - the Neolithic people. Their origin and history is wrapped up with myth and legend. Gibbon formed the opinion "that Spain, Gaul and Britain, are as far as one can trace or credit the resemblance of manners and language, were peopled by the same hardy race of savages".* He also informs us that before the Roman Conquest Britain was divided between about thirty tribes, among the most considerable being the Iceni in East Anglia. (5) The principal tribe in Kent during the Celtic Iron Age just before the Roman Conquest were the Cantii. (J.H. Evans).

In his commentaries Caesar found the local Britons tall, with long hair but shaven faces except the upper lip, dressed in skin and decorated with woad. In spite of their Druid worship they were humane yet courageous and from "their nearness and intercourse with Gaul were far more civilised than the other parts of Britain". (7) In any case there is good evidence to show to the credit of the Ancient Britons of Kent that they had reached a superior degree of civilisation than the general standard in the rest of the Country at the time of the Roman Conquest. (10)

- (a) Hasted admitted its obscure origin, believed it might mark the burial place of Catigern (son of Vortigern, a Welsh overlord of Kent) who was killed attempting to repel the Saxon invader at the Battle of Aylesford about 450 A.D. This is quite erroneous. It is a Megalithic tomb.

*This was in the New Stone Age. During many centuries afterwards Kelts from Western and Central Europe poured into Britain in waves of conquest and settlement bringing first the use of Bronze Tools and Weapons about B.C. 1750 and afterwards the use of Iron (about B.C. 500). (J. H. Evans.)

It would be quite impossible, even for one capable of the task to deal adequately, in the time available, with the great history which has grown up round the City and Port of Rochester through the past 2,000 years. For this reason and because this is a Health Conference, this paper must of necessity be limited to a cursory display of those historic events and influences which have had a medical or social bearing on the welfare of the inhabitants afloat on its waters or resident on its shores.

In general terms, life in this locality throughout the ages has been afflicted either by Invasion, War, and Epidemic Disease or, profited by commercial prosperity and the generous benefactions of hospitals and similar noble foundations. All these the community has endured or enjoyed under the guidance of the Civic Fathers of their time and, it is to these particular aspects of the Port that this paper will be directed.

WARS AND INVASIONS

THE ROMANS BRING CIVILISATION AND LAW.

The Romans made their second landing in Kent in 54 B.C. but did not settle in the County until 43 A.D. when, under Plautius, they invaded England, to remain in complete control until 411 A.D.*

At the time of their second landing, Rochester in spite of its strategic situation, does not seem to have been of any particular importance as a defensive position for, when Caesar had defeated the united forces of the Britons near Canterbury he met with little opposition in Kent. (2) The Britons retreated to the furthestmost hills of the country, before an irresistible Roman Army when the invasion was made in 43 A.D.#

But it was under Roman Government that the foundations of the City arose. It was laid out as a Roman Camp under the name of Durobrivae on the River Madus. They built a ford. A bridge followed, with a road (b) which joining Watling Street continued from London to the North, and Rochester was on the map as a fortress and connecting link between the Continent and London. Civilisation always followed hard on the Roman sword and Rochester under the provincial praetorship enjoyed all the advantages of improved roads, housing, commerce and agriculture. Unlike Eboracum (York) and Verulamium (St. Albans) which as Roman "Municipal Cities" enacted their own laws and were exempt from some Roman ones, Rochester was only a 'Stipendary' City, (16) compelled to pay tribute and governed by Roman officers who, as usual, laid down a sound base of local government.

It seems clear that although not a premier Roman City such as York, it was undoubtedly a place of some eminence but it is remarkable that no great mention is made of it in the historical account of the famous battle fought at Aylesford (c) between the Britons and Saxons some forty years after the Roman departure. (2)

(b) An original section of Watling Street from Strood may be seen in Rochester Museum.

(c) A few miles from Rochester.

*The last of the Roman Garrison was withdrawn in A.D. 442.

#By A.D. 70 the conquest of South Britain was complete.

It was the difficulties at Rome which eventually forced the recall of the Roman legions to defend Italy against the Goths in A.D. 411 but to speed them on their way the Picts, who were simply ancient Britons who had sheltered in the Highlands and Welsh Hills from the Roman Conquest, (6) became more persistent and successful in their forays. The Jutes from Jutland were also harassing the Kent Coast along which the Romans had built a defensive chain of forts

SAXON AND DANISH DESCENTS

Unfortunately, the continual internecine strife of Picts, Saxons and Danes which the country endured for 600 years after the departure of the legions, obliterated the Roman civilisation which became a vague tradition of the past but relics of their stay on the Medway are still visible in the City Walls, Watling Street and other roads, the Upchurch Pottery and a temple to Mithras (d) as well as in the metal implements, coins and other 'finds' unearthed during excavations.

Left unaided, those Britons who had accepted the government of the Romans and lived in the Roman settlements, fought bravely against the Saxon invaders who, quick to realise the effect of the Roman evacuation, increased the intensity of their raids to such an extent that they were able to establish a 'beach head' about A.D. 449, on the Isle of Thanet, under their warlike leaders Horsa and Hengist. From this and other bases they eventually invested the most of England.

Making a sudden onslaught on the Britons from their Kent beach head and advancing towards London, they found their passage barred by the river and garrison fort at Rochester. The Saxons then turned South to engage another force of Medway Britons at Aylesford where a bloody battle was fought. The Britons were routed. Horsa fell in the heat of battle, as did Catigern son of the overlord of Kent. (6) Some ten years later Hengist became the first Saxon King of Kent. (4)

The merciless slaughter which followed this battle struck the whole keynote of the Saxon Conquest. This was the beginning of the end for the British race. Two hundred years after Aylesford the Britons had disappeared from the greater part of the land. (6)

In 596 St. Augustine landed in Kent, where Ethelbert I was King.* This King embraced the Christian religion and built the Church of St. Andrew in Rochester, making it a Bishop's See in 604, by which he raised the City from comparative obscurity and gave it a distinguished place in ecclesiastical and civil history. (16) The first Bishop was Justus. But this did not bring peace. Eighty years later Lotharius usurped the throne on the death of his Brother Egbert and, in prejudice to his nephews, became 9th King of Kent. In this usurpation he committed great excesses and he particularly plundered Rochester, driving Bishop Putta from his See.

(d) At Eccles (the Roman Aiglissa).

*Christianity had reached the Roman Provinces of Britain from Gaul at the latest by the 3rd Century. Alban "the promartyr of Britain" being put to death as a Christian during the persecution of Diocletian, June 22nd 303, at his native town of Verulamium.

Two or three years later Rochester again felt the miseries of war and rapine during an invasion by Caedwald, King of Wessex, but apart from this it does not appear to have suffered any other great scourge during the Saxon Heptarchy. (2)

In the course of time the Saxons developed a crude civilisation and helped to build the English Constitution. The Division of Counties into Shires and Hundreds, the County Court, the Sheriff and trial by jury are reminders of their influence on our administration. (16)

But the Saxon settlers, in their turn, were now about to be subjected to a long period of recurrent invasions even more terrible than their own. Rochester, now a Saxon City, was frequently plundered and burnt by the Danes. It was no longer a fight between men of different races. Although the Danes were the same in blood and speech as the people they attacked, they were the most ferocious of all our raiders. (4)

Their first devastating raid into the Port was in 789 when they plundered everything they could lay hands to and slaughtered indiscriminately. Forty years later they laid waste the Isle of Sheppey. In 840 the City and Port was again ravished and so it went on, raid following raid, until the time when the whole country became subordinate to the first Danish King of England - Swegen in 1013.

The Danes frequently met with a stubborn Saxon resistance. In the earlier raids the Saxon fleet was quite inadequate to deny the Medway to the invaders and the very appearance of Viking ships rowing up the river struck terror into the hearts of the inhabitants. Later, and particularly in the reign of Alfred King of Wessex, the Saxons established a powerful naval force and the Danes no longer had it all their own way, as witness a heavy reverse which they suffered towards the end of the 9th Century. Haestan, the Cannibal of the North Sea, having sailed up the Medway laid siege to Rochester. The besieged Saxons held out in the City until King Alfred came to their rescue, routing the Danes with great loss, capturing their fleet and also Haestan's Wife and two children. Their lives were spared but many Danes were put to the sword and their skins nailed to the doors at Rochester Cathedral. In this connection Pepys writes in his Diary in April 1661 "Then to Rochester Cathedral which is now fitting for use and the organ their tuning. Then away thence observing the great door of the church which they say was covered with the skins of Danes". Dart, in his 1724 history of the Abbey Church of St. Peter, Westminster, relates a like tradition. Portions of this supposed human skin from Westminster St. Peter's were examined by Mr. John Quickett of the Hunterian Museum, who ascertained beyond question that in each case the skin was human. (e) This being so, it is a reasonable guess to say that the skins on the Rochester Cathedral door, were also of human origin.

Probably the most determined of all the Danish attacks on the Port was in 999, in the reign of Ethelred the Unready. With a fleet of ships they came up the river as far as Rochester laying waste on both sides. The widespread terror which resulted induced the citizens to vacate Rochester which was sacked and burnt.

(e) This note is from a communication from Mr. Albert Way to Lord Braybrooke, (Pepys' Diary, Wheatley Edition.)

By this time the Danes had various settlements throughout the Country. One was on the Isle of Sheppey and three years later Ethelred, in despair, ordered a general massacre of the Danish Settlers which took place on St. Brides day 1002. In the Isle of Sheppey numerous 'coterils,' or grass mounds, are still visible marking the interment of the massacred Danes. (4) This treacherous slaughter was speedily avenged by Swegen who eventually became King of all England in 1013.

Possibly the last Danish onslaught on the Port was during the reign of King Canute who had succeeded Swegen in 1018. Perhaps to subdue some recalcitrant, or rebellious citizens, he sailed up the Medway leaving devastation behind him. "Wastings on all sides he pierced into West Saxons leaving nothing inviolate that might be defaced with fier or with sword". From this time there is no further record of any invasion of the Port until the Norman Conquest.

A friendly Viking ship was rowed over from Denmark in 1049 and came up the Medway where the crew contrary to many ancient receptions were welcomed with open arms and indulged in 'wassail' by the Naval and Civic Authorities.

THE NORMAN CONQUEST.

The Norman arrival in Britain was not accompanied by the barbarities and atrocities which characterised the Anglo-Saxon and Danish settlements and, in respect to Rochester had the effect of raising its military and commercial status, confirming its ecclesiastical importance and establishing in 1078 one of the earliest, if not the first, hospitals in England for the isolation of Lepers. (f)

Rochester Castle began to rise on the site of an earlier fortification which had existed, at least, from Roman times. (g) Under the supervision of Odo, Bishop of Bayeux, and Gundulph, Bishop of Rochester, the keep and the main part of the walls and outer defences of the present structure were commenced in 1080 reaching completion in 1126. Further improvements in the reign of William II made it the strongest and most important fort in Britain at that time. Rochester was now a military key point and an important Port in those days.

Concurrently with this defence policy Bishop Gundulph instituted a social service for the relief of the numerous patients afflicted with Leprosy at that time, by establishing St. Bartholomew's Hospital, for which a chapel was built later and still exists in the High Street at the boundary of Rochester and Chatham.

In addition to these activities the Ecclesiastics were not unmindful of extending their religious influence and Gundulph commenced to build a Cathedral to replace the small Saxon Church of St. Andrew which had been consecrated in 604. Only a small proportion of the original remains, disastrous fires in 1130 when the City was laid in ashes and again fires in 1137 and 1177 destroyed the major portion.

The earlier Charters granted to the City and Port by the Norman Conquerors gave most important commercial rights and privileges to the citizens. (See p. 33)

(f) Rival claimants to the first hospital in England are Harbledown near Canterbury and St. James, Westminster.

(g) Lambarde affirms that there was a Castle in Saxon times about 770.

All this progress was made during a time of comparative peace. But in the period of strife which preceded and followed the Magna Charta, the City and Port suffered a great deal on account of its military importance as a strategic base. It was besieged and badly damaged on several occasions, sometimes by the King, at other times by the Barons. After one such seven weeks siege of the City and Castle by King John, he spared the Barons but hanged all the soldiers except the bowmen. The Barons in the reign of Henry III again defended themselves in the City and Fortress, which again suffered considerable damage. "The Castle at Rochester was much in the eye of such as were the authors of troubles following within the realm so that from time to time it had a part almost in every Tragedie". (Lambarde)

The hero of English democracy of these times was a Frenchman, Simon de Montfort afterwards Earl of Leicester, who in the lead he gave against encroachments of the King on the liberty of the subject makes his time an epoch-making one in the history of English liberty. (17) Under his leadership Rochester Castle was besieged by the Barons in the reign of Henry III in which attack he introduced entirely new tactics in the assault of fortresses of the time. He ordered fireships to be sailed from London to Rochester Bridge to where it adjoined the City Gates which, on being set alight, with a following wind, destroyed the City Gates "the magnates who were within fled to the Tower (Castle)". Leicester voluntarily raised this siege but not before he had destroyed the blessed Church of St. Andrew (Cathedral) and crucified its sons.

"The last repairs to the Castle and City fortifications appear to have been in the reign of Edward IV. Since then they have progressively advanced to their present state of decay". (2)

On the whole one must conclude that the Norman succession brought many advantages to the City and Port of Rochester.

After all this strife it took some time to establish a national unity between the nucleus of the original Britons, and their numerous invaders. The Port of Rochester had gained the invidious privilege of being the cockpit for successive invaders of Britain but when all provincial and racial differences had been crushed by pressure of the Normans, Rochester and its Port reaped great benefits from the Royal Patronage. In the centuries succeeding the Norman Conquest the City, populated by a hybrid race of British, Roman, Saxon, Danish and Norman blood, probably reached the peak of its eminence.

THE SPANISH ARMADA.

The danger of a Spanish invasion convulsed the Country and induced Queen Elizabeth, among many other defensive measures, to strengthen the Medway fortifications and promote Dockyard improvements. Under her direction Upnor Castle, which played an important part in the Dutch invasion of the Port in 1667, was built and garrisoned. The Armada made no attempt on the river but in July 1588 a Spanish treasure ship was captured by Drake and brought into the Port where her commander, General Don Cerinimo, remained a prisoner of war until his death on 15th December, 1591. (4)

DUTCH WARS AND INVASION OF MEDWAY.

Prior to the Restoration of Charles II in 1660 Admiral Blake, under the Commonwealth, had brought the Navy into a high state of efficiency and had repeatedly proved its superiority over the Dutch in battle, thus giving Britain the Naval supremacy for which both countries had striven. Peace had been made with the Dutch in April 1654, the Dutch recognising the English flag as supreme but not without some natural rancour. In deed, the English and Dutch remained rivals and, in spite of the peace, traders fought on their own account.

It was not long after the Restoration before there was a war essentially for trade and Empire expansion. In 1664 an English Fleet had captured New Amsterdam (now New York U.S.A.) and this, together with conflict as to the New Guinea and African trade, led to a declaration of War for which Parliament voted one and a quarter million pounds. There were strong suspicions that some of this money voted for the Fleet was applied for the maintainance of the King's vicious and dissolute Court, the corrupt state of which is a matter of history. Apparently no objections were raised to the vice, only to the expense. (17)

A powerful fleet, was in any case, fitted out, consisting of 110 ships, excluding fire ships, 4,537 guns and 22,206 men, under the command of Prince Rupert. (4) An unsuccessful attempt was made to blockade the Dutch Fleet in their Home Waters and eventually the rival Fleets met at Lowestoft on June 3rd 1665, when the Dutch were defeated with the loss of 24 ships, some 2,500 prisoners being taken besides the killed and wounded. The result, however, was indecisive - Pepys records in his diary that "much more might have been done if the enemy had been pursued". The following year another indecisive battle was fought off the North Foreland with heavy losses on both sides and 2,000 gallant English seamen were killed, 10 ships lost and many prisoners taken. From all accounts the Dutch seem to have had the best of it. Evelyn, on the 6th June, wrote "God knows it was rather a deliverance than a triumph", and Pepys the following day "I do find great reason to think we are beaten in every respect".

The gradual deterioration in the British Navy, following the Restoration, had become a very serious matter by the beginning of 1667, the year in which the Dutch invaded the Port. The finances of the Country were in a deplorable plight, organisation was bad, the dockyards were impoverished the men being paid by Tickets or I.O.U's which they had difficulty in negotiating so poor was the Government's credit. The Admiralty had not a firm grip on the situation and dockyard men and sailors, not receiving wages, frequently failed to report for duty or deserted. As early as June 1666 Pepys records that "Hundreds of sailors were leaving Rochester" and by the time of the invasion in June 1667 the Purser of the "Princess" (after the battle,) narrated to Pepys that "He had 180 men on his roll for pay and victuals at Chathamof which only 5 did any fighting at this late business", an indication of the serious loss of morale. The dockyard was practically deserted after the battle and pay had to be stopped after the Duke of Albermarle had reported that not "above 3 in 1,100 in pay there did attend there to do any work there". There was nothing but discontent among the officers "and all the old experienced men are slighted". (Pepys). The efficient Cromwellian captains had been replaced by "Cavaliers".

Immediately before the Dutch invasion of the Medway, at the Court and Admiralty complete confusion reigned and orders and counter-orders added to the muddle. The countryside was in a panic too. Evelyn, on

June 10th, (the day of the attack on Sheerness) records "The alarme was so great that it put country and city into a panic fear and consternation such as I hope I shall never see more and everyone was flying none knew why or whither".

In spite of repeated remonstrances, by the Naval Commissioners and Admirals, on these deficiencies and on the growing power of Holland it had been stupidly decided in 1666 to lay up a great number of ships in reserve and to keep only two small squadrons at sea during the following year. Sir William Coventry was blamed for this policy. Economy measures were, no doubt, one of the reasons for this decision but the King was already embarked on negotiations for peace and he was, as it proved later, banking too heavily on them being concluded successfully. Pepys says "while have not a ship at sea to do them any hurt but are calling in all we can while our ambassadors are treating at Bredah". This was the state of affairs early in June 1667 and was no doubt known to the Dutch who had been refitting their Fleet and waiting this opportunity. The Dutch Parliament resolved on attempting some important enterprise even to entering one of the enemy's Ports and clear orders were given to Dutch Admiral De Ruyter as to the attack. "It shall make sail for the Thames, that God willing it should enter the River and from thence the River Medway which leads to Chatham and Rochester.....and should try under the favour of Heaven to destroy or take all the English ships that shall be found before or near Chatham.....and to burn the King's magazines, the provisions and munitions of war.....or to render them totally useless". (i)

It is likely that the Dutch knew how ill-equipped and weak were the Medway defences at this time. Although the King had given orders early in 1667 for the strengthening of defences and reinforcement of troops at Sheerness, Chatham and Upnor, there had been interminable delays and, in spite of visits paid by the King and Duke of York to push matters ahead, the Medway defences were of very meagre character when the invasion occurred; the forts were ill-constructed, the ammunition was inadequate and guns had either failed to arrive or were not mounted. Pepys after the invasion says "We were told at the batteries upon my seeing the field guns that were there, that had they come a day sooner they would have been able to save all".

As a barrier to the advance of the Dutch Sir William Penn had, in March, proposed a chain (boom) to be erected across the water "at the Stakes" but this too was never effectively completed. This chain is believed to have stretched from some point on a line a little below Gillingham Church to a position about midway between Folly Point and Hoo Ness. (4) It was flanked by two ill-constructed batteries hurriedly erected. Moored behind the chain were the guard ships "Mathias" 52 guns, "Charles V" 53 guns and "Monmouth" 70 guns.

Another serious omission was the failure of Peter Pett, Superintendent of the Dockyard, to carry out the Duke's orders, one of which was to move all the great ships, lying above the Chain, higher up the river to be moored near Rochester Bridge. For this default Pett was later arrested, perhaps as a scapegoat, and imprisoned in the Tower but was later released.

(i) Life of De Ruyter. Amsterdam Edition 1687.

On 11th June, 1667 by which time Sheerness had been captured, the Duke of Albermarle, Lord High Admiral of the Fleet (formerly General Monk in Cromwell's army), arrived in Chatham from Gravesend where he had spent the previous night. He inspected the defences and took such emergency steps as were possible to strengthen them in the time available. He ordered five ships to be sunk in the narrow channel near the Mussel Bank about two miles below Gillingham but, on soundings being taken in this vicinity, to everybody's surprise, another channel previously unknown to the pilots was found.

Time being too short to sink other ships in this newly discovered channel he decided to sink some ships within the Chain. The Dutch by this time were approaching Chatham but being delayed by the sunken ships at Mussel Bank they missed the tide and had to fall back. This gained a little extra time and at dawn on the 12th June the "Sancta Maria" was ordered to be sunk in the deepest part behind the Chain beside two ships which had been previously ordered to be ready for sinking when occasion arose. Unfortunately, the pilot ran her aground much to Albermarle's annoyance, who later said "for if that ship had been sunk in the place appointed the Dutch ships could not have got behind ours sunk within the Chain and none of the King's ships within would have been destroyed". A few hours after she grounded the Dutch attacked.

In command of the Medway was Sir Edward Spragge, an able officer of recognised ability, who lay with a very small squadron at Sheerness until it was captured. No doubt he had done his best to get the defences put right but he was only a commander of what was given him to command.

Such were the defences on the Medway and the state of the Country on the eve of invasion. Almost as deplorable as they could be to resist a determined aggressor.

On the 3rd June, 1667, De Ruyter had set sail from Texel with 60 sail of the line besides frigates and fireships and smaller ships and by the 7th had anchored in the King's Channel where he lay unmolested. This Fleet carried 3,168 guns, 12,800 seamen and 2,195 troops. (18)

The next two days were spent in preparation for attack. On the 10th Van Ghent was detailed to try and capture some valuable Barbadoes merchant ships above the Hope in the Thames but they escaped up to Gravesend and he returned to Sheerness. This was probably a diversion to distract the British from the real point of attack because, on Van Ghent's return, it was decided to attack Sheerness at once. Three Dutch ships were ordered in to give cover to the troops. Van Ghent began the assault by bombarding Sheerness for one and a half hours and then, under cover of the guns, Col. Dolman (an old Cromwellian soldier), with 800 men some of whom were British deserters, won the fort without any real resistance, the troops having retired. There were no Dutch casualties and at the most two or three English soldiers killed or wounded. As already mentioned, Sir Edward Spragge who was in command of the Medway, was able to escape and did valiant work at Chatham later. Having invaded Sheerness, the Dutch blew up the fortifications and burnt the store houses and stores to the amount of £40,000.

The next day, the 11th June, an attempt was made on Chatham but was held up at the Mussel Bank by the ships sunk in the Channel the previous day and the Dutch had to drop down the river with the ebb tide.

At 10 a.m. on the 12th June, undaunted, they advanced up the river again, got over the obstructions at Mussel Bank, by some believed to be through the assistance of a British seaman who piloted them through another channel. Be that as it may, they with seventeen ships came on with a fair wind and tide, two men o' war leading followed by fire ships and supported by the remainder.

The leading ships, as soon as they were within range, engaged the guard ships at the Chain. Coming abreast the "Unity" which had escaped from Sheerness on the 10th and now lay outside the Chain, the Dutch ship "Vreede" under Van Brakel, after a few broadsides, carried her without difficulty and eventually she was taken as a prize to Holland.

At the same time one of the Dutch fireships charged and stuck on the Chain but another, heavier, following immediately broke the Chain and then "the ships came in that very passage where the "Sancta Maria" should have been sunk" (Duke of Albermarle).

Three other fireships came on, one was sunk but one set fire to, and destroyed, the Chain Guardship "Mathias", the other firing the "Charles V" which blew up during the night. Most of the men on the Guardships were lost. During this time the flanking batteries at the Chain were doing their best but the Dutch do not seem to have paid much notice to them "Our men made a stout resistance" (London Gazette) but for how long is not mentioned. The Dutch account simply says that after having lost some men the Guardships were abandoned.

The Dutch were through the guard Chain, behind which lay eighteen of the finest ships not only in the British Navy but in the World. The finest was the "Royal Charles". All were in reserve with skeleton crews "The Royal Charles" was carried off without the least resistance. Here is Captain Hart's report to Pepys on its capture "which nothing but carelessness lost the ship for they might have saved her the very tide the Dutch came up on if they had had boats (for towage).....that the Dutch did take her with a boat of 9 men who found not a man aboard, and that they carried her down the river at a time when the best pilot in Chatham would not have undertaken it, they heeling her on her side to make her draw a little water". There were Englishmen aboard the ship that took her "and they were heard to call to each other 'We did, heretofore, fight for tickets but now we fight for dollars' and that 'They had come to have their tickets paid' ". Pepys adds "It is certain as it is now, the seamen of England would go over and serve the King of France or Holland rather than us".

The only other operation on this day, by the Dutch, was the burning of the "Sancta Maria" which had run ashore on her way to be sunk at the Chain defence on the morning of the same day.

Feverish efforts were made that day and night to retrieve the situation. Albermarle spent the night in attempting to man new batteries with the help of volunteers, many of his men having deserted because pay had been so irregular. In the excitement of the moment ships lying in the vicinity of Upnor were cut adrift with a view to their being carried up stream with the tide and then scuttled. One ship the "Henry" took matters into her own hands "being let loose to drive up the river of herself did run up as high as the Bridge and break down some of the rails and so back again with the tide and up again and then berthed herself so well as no pilot could have done better". (Pepys)

The final assault on the ships lying in the Chatham and Upnor reaches began about noon on the 13th when a squadron of about six men o' war together with five more fireships were detailed for the purpose. About 2 p.m. Upnor Castle, under the command of Major Scott, was subjected to a preliminary bombardment to which it, and the Dockyard battery on the other side of the river, returned a heavy fire which, however, did not restrict the Dutch advance. Pepys says "Three men of war came up and made no more of Upnor shooting than a fly. Upnor played hard with their guns at first but slowly afterwards, either through their men being beaten off or powder spent". He mentions also that Upnor Castle had not "received any hurt by them although they had played long against it" and adds that he was told "in all the late attempt on Upnor there was one man that they knew killed on shore" and he was a spectator. The evidence also seems to show that the dockyard cannonade was at too great range "for the bullets only grazed on the water".

Through the smoke of the bombardment the Dutch fireships now attacked the "Royal James", "London" and "Royal Oak", three fine 80 gun ships which lay above Upnor Castle. They had been scuttled in the shallows but the greater part of their hulls lay above the water, to which level they were burnt down by the fireships. On this episode Evelyn writes in his diary "as dreadful a spectacle as Englishman ever saw and a dishonour never to be wiped off".

The Dutch were, justifiably, very proud of their venture. Having invaded the Country which a few years before was 'Mistress of the Sea' they had captured two ships: - "Royal Charles" 82 guns and "Unity" 42 guns. In addition they had burnt six ships with a total of 394 guns viz., the Guardships "Mathias" and "Charles V" on which many men were lost: "Sancta Maria", "Royal Oak", "Royal James" and "Loyal London". Several others were sunk including the "Royal Catherine", "St. George", "Victory" and "Marmaduke" with a total of 258 guns. The total Dutch losses apart from their fireships were two men o' war which had gone aground and which they burned to avoid their capture. Their losses in men were small, by some stated to be as low as 30 killed and wounded, by others at a maximum of 150.

Their discipline and behaviour throughout was of the strictest and most correct character. Pepys mentions that they were very well behaved and when they landed at Gillingham as they did elsewhere "they killed none of our people, nor plundered their houses..... and not a house burnt which is to our eternal disgrace that what my Lord Douglas' men found there they plundered and took all away". Local watermen told Pepys "our own soldiers are far more horrible to those people of the country than the Dutch themselves".

For some days after they left the Medway, they cruised off the coast entering the Thames estuary occasionally but no further attack was made and they eventually returned to Holland leaving the British Lion licking her sores and the whole Country in a state of despair and despondency.

There was an enquiry into the failure of the defences, as so often happens after such events. There was an immediate but too late improvement in the fortifications of which Pepys writes after an inspection that he was pleased to see "so many fortifications as I have seen of late" and that "the new batteries which indeed are very fine and guns placed so as one would think the river should be very secure".

It was the most disgraceful episode that had occurred in English history for centuries. The Government made no attempt to avenge this insult, instead in the same year it patched up a peace known as the Treaty of Breda; one effect of this was to transfer to the English the Dutch Colony of New Amsterdam (Captured by England in 1664) and it was granted to the King's brother James, Duke of York, and in his honour was named New York. (17)

WORLD WARS I AND II.

The Port has remained free from invasion since, although catastrophies did befall it in World War I and II as when the "Bulwark", a 15,000 ton Battleship, at 7.50 a.m. on 26th November, 1914, blew up in Saltpan Reach with the loss of all the crew, the sunken vessel still being marked by wreckbuoys. Six months later, the "Princess Irene" met a similar fate in Ket Hole Reach, 800 perishing, there being no survivors. An ariel attack on the Barracks on 30th September, 1917, when a bomb killed 130 men in the glass covered drill shed, many of the deaths being due to falling or flying glass. All these tragedies on Chatham manned ships and bases cast a profound gloom on the community.

During World War II, bombs and mines magnetic and otherwise caused many shipping losses in the Thames Estuary and a lesser number in the Medway. Indeed, surprisingly little damage was inflicted on war-time shipping in the Port, which may be accounted for by the strong local air defence and the decrease in maritime trade in the river. The City and its neighbours did however suffer considerable damage and many casualties.

In the light of history the ravages of war in the Medway during the 20th Century were insignificant compared to the terrible and merciless onslaughts made on the local inhabitants in the years between the Roman and Norman Conquests and one must conclude that it is actual invasion which brings the major horrors of war in its wake.

EPIDEMIC DISEASE AND QUARANTINE.

PLAGUE

There are no exceptional records in the Port with regard to Plague. The worldwide epidemic of 1349-50 with its origin in China, took its toll in Rochester and district as elsewhere. "This plague of the reign of Edward III proved fatal to many of the inhabitants of the City". (2) Many villages were left without a single inhabitant.

And again, in 1665 the Plague raged in the Port of Rochester and the register of one Rochester parish (St. Nicholas) shows that "between April and Xmas above 500 were interred in the burial ground of that parish" (16) and there is also a long list of deaths for 1666. Chatham was similarly affected.

"Sir Jno. Mennes to Navy Commissioners wants £18,000 to pay whole yard, begs to be sent by water to avoid infected places. The Plague increases at Chatham; 30 died last week and 100 houses are infected, no order is preserved but sick and well promiscuously visit each other". (Knight 16 August, 1666).

At this time the population of the whole City would be at the most some three to four thousand (The Poll Tax showed in 1661 that there were 1,113 persons over 14 years of age in the City living in 487 houses).

Two local officials must have had a disagreeable task during the Plague Epidemics. They were the "Borsholders" who were originally the headmen of 10 families or a "Tithing" of whom eventually two were appointed annually and made responsible in ordinary times for the good order of the City. During Plague epidemics, however, they had to notify to the Mayor all newcomers into the City "and such as might prove infectious persons whereby the City may be in danger of infection by the Plague". The real disagreeable task allotted to them is indicated by a Council Minute of the 14th May, 1665 where they had to swear the oath of the Searcher of Dead Corpses in the time of the Plague, "that they would search out dead bodies for evidence of the tumours or swellings or unusual spots or tokens" suspected or believed to be the plague "and make true reports thereof to the Mayor of the City or his Deputy". (16)

In 1665 Pepys, the Diarist, records that Plague had reached the Port by February and in August 1666 he found the Plague "so much" at Chatham "that it was much worse than ever it was". In this month the "pay" was made at Upnor Castle instead of in Chatham on account of the Plague.

The disease disappeared from this Country during the 18th and 19th centuries but it recurred in Glasgow in 1900/01 with 37 cases. On account of infection in Glasgow, specimens of blood were taken from any sick seamen entering Rochester port in whom there were suspicious circumstances. There was some cause for alarm in 1900 when the report on one such specimen "showed the presence of Plague Bacillus" but this was not confirmed. Its appearance in E. Suffolk in 1906-1911 with 21 cases and 15 deaths caused some epidemiological stir at least locally, on account of the considerable coastal trade in and out of the Medway. The serious feature was that there had been an infection of the Suffolk rats in the region between Ipswich and the Coast, attributed to the introduction of ships' rats infected with Plague. The infection was not wide-spread but it had dangerous possibilities and became more serious when, during 1913-16 infected rats were found at Wapping. (14) However, no plague came to Rochester.

There was another scare in the Port of Rochester in 1940 when a rat submitted for routine bacteriological examination was reported as being infected with Plague Bacilli. This caused great consternation but, fortunately, on more detailed examination it was found that although the Bacillus was morphologically identical it was not a true plague organism.

LEPROSY

Leprosy, which had prevailed in Egypt as far back as 3,000 B.C. was perfectly familiar to the Greek and Roman Physicians and throughout the middle ages prevailed extensively in Europe. During the sixteenth century it gradually declined.

The prevalence of this disease in the tenth and eleventh centuries and the dread in which it was held resulted in the erection of the earliest hospitals in Britain.

Two years ago there were 26 known cases of Leprosy in this country, of which 11 were living in a colony in S.E. England. Contrasted with its extensive prevalence in Europe and England in the middle ages it is difficult to realise what a scourge it must have been in the past. Denne, in his "History of Rochester" (1816) attributed its ravages in the tenth century "to the amazing resort of the inhabitants of this part of the world to the hot countries of the East" but it would be more correct to indite, the primitive living conditions, overcrowding and lack of hygiene, which existed generally at that time, for the propagation of this disease which is now known to be slightly infective and then only after very close continuous contact.

However, the Rochester Ecclesiastics were exceptionally progressive for their time in that they established St. Bartholomew's in Rochester, the first hospital for the reception of the "poor and leprous" in 1078. Harbledown, near Canterbury, and St. James, near Westminster, are unconvincing rival claimants for this priority. Like all Leper hospitals it was built outside the City Walls.

St. Bartholomew's House for the Lepers has developed into the modern general hospital of 200 beds situated in New Road, Rochester, to the southward of the original building. Of the Leper hospital only the chapel now remains and of the chapel "the eastern end is probably the remains of the original structure". (2)

The Society has enjoyed an independent and unbroken existence since its foundation. They possessed their own seal. (16)

In 1342 the governing body consisted of the Prior (who was a leper) nine bretheren and seven sisters; the hospital being very poorly endowed must have dissolved had not the monks of the Priory (Cathedral) of St. Andrew contributed liberally. It was so poor in fact that when the monasteries were dissolved by Henry VIII it was not worth confiscating which is the reason for its continued existence since then. In the reign of Queen Elizabeth it was in such a precarious state "as to be occupied by only two impotent persons". Lambarde, in 1570 described it as "a poore shewe of that decayed hospitall of St. Bartholomew", but the development of the R.N. Dockyard in Elizabeth's reign greatly increased the income from the lands owner by the Hospital.

The patronage was subsequently transferred by Henry VIII to the then newly created Dean and Chapter.

As a result of the transfer of Voluntary Hospitals to the State, the Dean of Rochester (and his successors) was appointed Honorary President of St. Bartholomew's Hospital, and retains the right and privilege to appoint 4 Brethren, resident in or near Rochester, to be associated with and assist in any possible way, the welfare and maintenance of the Hospital. The Dean continues his interest in the Chapel of the Hospital, and is to be consulted in the appointment of a Church of England Chaplain to the Hospital.

The monasteries which did in those days relieve the "sick and halt" were the precursors of our hospital service and this being so, their confiscation and dissolution by Henry VIII may be considered to be a precedent which was adopted in the National Health Service Act. There is this difference, in 1948 the hospitals were not dissolved!

For the "sick, improvident and necessitous" Bishop Glanville, in 1158, built Newark Hospital on the North side of Strood High Street. When the Act of Parliament was passed in 1545 granting the King all charities and hospitals it was given up and dissolved. Some of the sick who entered the portals may well have been lepers.

St. Catherine's Hospital, another refuge for "lepers or mendicants" was built and endowed by Simon Pontyn, Master of the Crown Inn, in 1316. (see p. 23)

SMALL POX, CHOLERA AND TYPHUS.

The importation of Smallpox into the port was not infrequent up to the end of the nineteenth century and the beginning of the twentieth. The last importation appears to have been in 1903. Most of the affected seamen were on barges.

Cholera does not seem to have made an appearance in the Port since 1893. In that year the Port Authority, at the instigation of the Local Government Board, purchased the 484 ton Brig "The Elk" for £515; to be used for the isolation of Cholera patients. The vessel required continual repairs, was frequently damaged by river craft and was never called upon in her lifetime for isolation of Cholera. She appears to have been more of a "white elephant" but was used in 1901/02 for the isolation of Smallpox contacts from ships and shore. She was also used in 1903 for the incarceration of two recalcitrant Smallpox contacts whom the Medical Officer of Health arrested and vaccinated and then put them on the "Elk" under guard! The "Elk" was eventually sold in 1907.

In 1896 abortive attempts were made to secure the burial ashore of any Yellow Fever Plague or Cholera dead that might occur on ships and it was decided "to direct masters to cause the dead body to be taken out to sea and committed to the deep as provided by Article 17 of the Regulations.

Although it has not been possible to trace any records of the occurrence of Typhus in the Port, its importation cannot have been an uncommon event in the days when this disease was rife in England: the convict prison hulks would be quite exceptional if they escaped periodic outbreaks of Typhus Fever.

MALARIA AND MOSQUITO INFESTATION IN THE PORT OF ROCHESTER

MOSQUITO NUISANCES.

Some of the Marshes, particularly in the lower reaches of the River Medway, are extensive breeding grounds for mosquitoes. Two species, both breeding in brackish stagnant water, have caused some concern in the past, one *Aedes Detritus*, because of its vicious biting propensities causing severe skin irritation, the bites frequently becoming septic; the other *Anopheles Maculipennis*, on account of its potentialities as a malarial carrier.

The *Aedes Detritus*, which has a range of flight of several miles, became such a nuisance that it was impossible to sit out of doors during warm summer evenings and it was decided to institute mosquito control measures in the Port. A mosquito survey of the marshes was made by

Mr C. Evans, Port Inspector, in 1937 This survey and a further one by Mr. P G. Shute, Assistant Malaria Officer of the Ministry of Health, indicated without doubt that many of the marshes were heavily infested. Spraying began in 1938 and apart from some of the war years, has continued annually from March to October, with the desired result of reducing the nuisance to negligible proportions

For reasons which are indicated later, no specific measures were directed against the malaria mosquito but, as they were found to breed in the same place as *Aedes Detritus*, many of them must have been eliminated during spraying operations

INDIGENOUS MALARIA.

As in many other low lying districts on the S.E. and S. coasts of England, where temperature and humidity are the most favourable for the completion of the parasitic cycle in the mosquito, Malaria was indigenous in the Port up to the end of the nineteenth century, reaching epidemic proportions from time to time

PROBABLE CAUSES OF DISAPPEARANCE OF ENDEMIC MALARIA. (9) (11)

There can be little doubt that the prevalence of Malaria in the past was due to the invasion of dwelling houses by *Anopheles Maculipennis*, which is the only one of the four British *Anophelene*s which lives in close association with man. Unlike most other English mosquitoes it is a domestic one, spending the major portion of its adult life indoors. It rarely bites anyone out of doors, or during the day, the disease being nearly always contracted during the night in houses or other warm (usually dirty airless) buildings frequented by *maculipennis* and man. It is only the female which carries the Malarial Parasite and like all other mosquitoes it is only the female who bites man.

Fortunately, they dislike clean airy buildings, so that nowadays, with the progressive improvements in household hygiene, they are found chiefly in warm stables and other animal houses. This characteristic, together with their preference for animal to human blood has, to all intents and purposes, severed their connection with man, with the result that the "ague" is rarely met with in this country outside the laboratory and asylum in which it is used in the treatment of certain mental diseases.

Although facilities may still exist for the occasional dissemination of imported malaria this disassociation of the mosquito from man has eradicated the endemic reservoirs of the disease in this country, but in the ports of Britain malarial sailors may still unwittingly infect local *Anophelene* mosquitoes

James in 1929, in laboratory experiments has shewn that "persons can easily be immunized against a strain of benign tertian parasite but that this resistance breaks down if they are inoculated with another species (quartan) or even with another strain of the same species" and offers the interesting proposition that, in isolated villages, the inhabitants became immune to their own strain but not to any foreign strain or species.

To the extended use of Quinine must be given a major part in the eradication of Malaria. Cinchona had been used in Kent since 1780 but Quinine was not introduced there until about 1840 when its cost was £1 a drachm. By 1892 its price had come down to 10d. per oz. and its introduction and cheapening, making it available to the poor, rather suggests

that Quinine was an important factor in the reduction of fatality and incidence".

In the Medway epidemic described below as soon as the disease was recognized and Quinine treatment instituted, the outbreak was brought under control.

As already mentioned, Malaria had disappeared from the Medway by the end of last century but there is some evidence that infection occasionally occurred in what might be termed 'malarial houses' of which a few remained at least some 30 years ago, in the islands of Sheppey and Grain (e.g., Queenborough).

1917/18 OUTBREAK IN THE MEDWAY.

Whether endemic Malaria persisted in a few limited localities or not, the recurrence of Malaria in 1917/18 became a matter of official and public concern. Of 330 cases in England, 189 contracted their infection in Grain and Sheppey. The urgent and intensive investigations which resulted added a great deal to our knowledge of the distribution and habits of the British malarial mosquitoes and provided the answer to the cause of the local epidemic, viz. transmission to man of malarial parasites locally acquired by *Anopheles Maculipennis* var. *Atroparvus*.

The outbreak also resulted in the Pneumonia, Malaria and Dysentery Regulations of 1919 (later amended by the Public Health (Infectious Diseases) Regulations, 1927).

This local outbreak was the outcome of invaliding many infested soldiers home, chiefly from Salonika to recuperate on the S.E. coast, including the islands of Grain and Sheppey. Many of them continued to relapse and from them the local *Anophelene*s became infected and caused numerous cases of indigenous Malaria in the civilian and service populations. Consequent on this, all known service malarial carriers were removed or excluded from areas which, on account of *Anophelene* prevalence, were scheduled as 'malarial suspect' or 'dangerous' but all troop movements could not be completed until late in 1918, and indigenous infection still continued with a similar number of cases in 1918/19. From 1920 onwards there have been very few cases of indigenous Malaria reported in England. Only a few cases occurred after World War II. The experience and knowledge acquired on the biological races of *Anophelene* in the 1917/18 epidemic had been remembered.

A similar epidemic is unlikely but should a case of relapsing Malaria occur in the vicinity of the breeding grounds of our local *anophelene*, this fact would require additional control measures, including the prompt treatment of any relapsing case and domiciliary contacts.

IMPORTED MALARIA IN THE MEDWAY.

It is rare nowadays to find a ship entering the Port with acute Malaria aboard but that it was no unusual occurrence is shown by three such incidents within comparatively recent time.

On 23rd June, 1918, the s.s. "Parvento" arrived from the Benue River and discharged at the Naval Dock riverside wharf. Three of her crew, suffering from Malaria, were removed to hospital. During the voyage the Captain and nineteen of the crew suffered from the same complaint.

Again, on the 19th January, 1920, the s.s. "Simoon", on arrival, reported Yellow Fever aboard. One man had been landed at Dover and died. Two of the crew were gravely ill and found to be suffering from malignant Tertian Malaria

A much more serious event was the case of the s.s. "Hunstanworth" which moored off Strood pier on the 17th November, 1922. It can be best described by quoting the report of Dr. S. Pritchett, the then Medical Officer of Health.

"I had been advised from Sheerness that illness was aboard but was not prepared for the extraordinary and appalling state of affairs to be revealed when I visited the vessel on the forenoon of the same day. On the hatch was lying a dead body and of the remainder of the crew, twenty-two in number, twenty were either dangerously ill or had been so within a few days and were likely to be so again. The sickness was due to malignant Malaria.....Four desperate cases were sent to Denton Hospital, seven more next day to Greenwich Hospital and two more on the 25th November, the day before the ship left the port..... The ship had been on the W. African coast for fourteen days before she left Rufisque, Senegal, on 2nd November, 1922. Already there was sickness aboard and on reaching Las Palmas on the 7th November, four of the crew including the Captain, were landed sick. She then, after picking up four more sailors, sailed for England but day after day there was further sickness aboard and, in the end, with a vessel navigated by but two or three of the crew, she made Sheerness (one man was put ashore here and died). I should like to observe here that this was a remarkable feat, to say nothing of the fact that there was a dense fog in the Channel at the time".

SPRAYING THE MARSHES WITH D.D.T. AND KEROSENE.

The local spraying is not carried out indiscriminately but only those stagnant pools showing the presence of marsh mosquito larvae. The marshes are so extensive that general spraying would be prohibitive in cost. Moreover it is often found that quite large pools, some a quarter of a mile long, are free from larvae, whilst a small cattle hoof mark may contain hundreds. Including the cost of wages, the annual expenditure amounts to roughly £700. To spray all stagnant pools irrespective of whether they contained larvae or not would cost thousands of pounds.

YELLOW FEVER IN THE MEDWAY

The vector of this disease, *Aedes Aegypti*, does not survive in latitudes north of 40° unless some exceptional climatic condition of temperature and humidity prevail. The last recorded entry of a "Yellow Fever" ship was the arrival of the "Hecla" at Swansea during a very warm season in 1865. A small shore epidemic developed.

A heavily infected Yellow Fever ship came to quarantine in the Medway in 1844 after a disastrous voyage. A very interesting article on this Naval Yellow Fever ship H.M.S. "Eclair" was published in 1951 by Surgeon Rear Admiral Mussen, R.N. who kindly sent me a copy of his article from which the following extract has been made:-(13)

She sailed on the 2nd November, 1844, with a crew of 146 officers and men, on her one and only commission to the W. coast of Africa, to keep down the slave trade. After a stay at Ascension to complete the normal alterations for service in the tropics she reached the African coast on the 20th December and for the next three months, during which 40 kroomen were taken on as extra complement, she was cruising off the coast. After this she kept an eye on the rivers and inlets, which entailed much boat work by the crew in the swamps which abounded. In addition, they were also engaged from early July until 9th August in cleaning an old ship (the "Albert") which, two years before, had returned from an ill-fated exploration of the Niger and had not been used since. The "Albert" was in a dirty condition and presumably swarmed with infected mosquitoes.

The first case of Yellow Fever occurred on the 3rd April, 1845, and between that date and the 15th October there were 74 deaths on board, including the Captain. The 'Fever' was at first attributed to the "Common African Fever" but events looked at in retrospect proved it to be a virulent form of Yellow Fever. Autopsies on some of the bodies showed evidence of gastric haemorrhages. Jaundice and Black Vomit were presenting symptoms and the mortality was about 50%, most cases dying within a few days, all of which are strongly presumptive of Yellow Fever.

Not one of the 43 kroomen aboard were affected in the epidemic. (Perhaps they had an acquired immunity) The ship's surgeons suffered a heavy mortality: six out of seven were stricken, three after the ship reached the quarantine station in the Medway: four died. It is to their credit that on the death of one there were ready volunteers from the Service to replace them.

Although no fresh cases had occurred from the 5th June to the 19th July, a period during which she was under way most of the time, it was evident that there was little chance of any improvement in the health of the ship whilst anchored in African waters. For a fortnight after her return to Freetown, which was on the 4th July, the disease reappeared with nine fatal cases and she made for the Cape Verde Islands, arriving at Bona Vista on the 20th August. Three men died during the four day passage. Dr. Denny, a resident surgeon at Bona Vista, who himself became infected and died, granted Pratique: permission to land the sick was eventually given and they were put ashore on the 31st August. In the ten days prior to this there were 16 cases and 5 deaths.

Putting the sick ashore proved of no avail and fresh cases continued to occur, not only on the ship but also ashore among the inhabitants. On the 12th September, in an endeavour to ameliorate the epidemic and on the advice of the two ship's surgeons, Maconchy and McClure, the sick crew were brought off shore and she proceeded northward to Madeira, arriving there on the 20th. On this passage Captain Estcourt died on the 16th September and Dr. McClure died the following day. Dr. Maconchy died on arrival when the ship was in Funchal Roads. An assistant surgeon, Mr. S. Bernard, volunteered and was appointed temporary ship's surgeon and the ship sailed for Portsmouth on the 21st September. There had been 41 fresh cases with 12 deaths between leaving Bona Vista on the 12th September and her arrival off Ryde on the 28th September with 23 sick aboard including 5 moribund. Pratique was refused at Portsmouth and she was ordered to the Foul Bill Quarantine Station at Stangate Creek, in the Medway, where she arrived on the 2nd October. There, within a few days the 41 men who had escaped the fever were transferred to the "Revenge" (in reserve).

The convalescent were put on board another ship but the infection continued in Home waters. The sick were left on board and included both Surgeon Bernard who fell ill on the 3rd October and died on the 9th October, and Surgeon Coffey who sickened on the 5th but recovered. The pilot who brought her round from Portsmouth fell ill on the 6th and died on the 10th.

When Surgeons Bernard and Coffey fell ill Drs Rogers and Stewart from the Flagship "Ocean" volunteered to look after the sick and went aboard the "Eclair". Dr Rogers became infected but recovered. Dr Stewart escaped being the only surgeon associated with the ship who did not fall a victim.

The last fatal case was on the 12th October, some six months after the first case appeared. Bernard, the last surgeon to die, was buried on Burntwick Island in the River Medway: he was 27 years of age. The bronze tablet commemorating his memory on the Island was found and brought to the Naval Armament Depot at Upnor about a year ago.

"Thus ended the fever in the "Eclair" with a total of 74 deaths aboard, over half her full complement of 146 officers and men".

Surgeon Rear Admiral Mussen's conclusion was "There is no doubt that the disease in the "Eclair" was a particularly virulent form of Yellow Fever originally contracted at Sierra Leone, possible from the "Albert" and continuing through infection of insect vectors on board and at Bona Vista".

QUARANTINE.

The Port of Rochester was closely associated with and is mentioned in the first general English statute on quarantine procedure which was passed on the 22nd December 1710.

Prior to this the Privy Council of Scotland following the 14th Century example of some continental countries (on account of the Plague) in 1564, restricted trade with Dantzic and ordered foul ships into quarantine. Some 20 years later the English Government were inspired to similar action on account of Plague in Bordeaux in 1585, but it was not until the Act of 1799 that the King, by proclamation, could extend quarantine to all contagious diseases.

These Orders in Council were the forerunners of several others during the 16th and 17th centuries but they were confined to a particular trade, had only brief duration, and were frequently disobeyed up to the time of the first Quarantine Act of 1710, which was preceded in the same year by the following proclamation:-

"On account of the Plague in the Baltic Ports Orders in Council were made in August, September, October, November, December, January and February last for Quarantine. These Orders have been disobeyed. Orders are now given:-

- 1 All ships from the Baltic to keep 40 days quarantine
- 2 These places for Thames bound ships to be Standgate Creek on the south shore of the Medway opposite the Isle of Grain, Sharpfleet Creek and the lower end of the Hope

3. No person or goods to be landed there in that time.
4. If, after quarantain, there is a clean bill of health, cargo may be landed except linen, Polonia wool, hogs' bristles, spruce yard, feathers, hemp and flax, for which order will be taken.
5. Goods imported from the Baltic to be landed at Stanforth Island in the Medway and in other parts ordered.
6. Ships receiving people or goods under quarantain must undergo it themselves.
7. Persons employed in the hold for working iron, tar, pipe stoves, timber, etc., there to undergo a new quarantain.
- 8.&9. Captains of ships of war and Customs Officers to enforce quarantain."

(Tudor and Stuart Proclamations).

All such well intentioned measures had no appreciable effect on limiting the introduction of Plague.

The first general stature of 1710 was to the same effect and similar rules appeared in every quarantain statute until that of 1825, which abolished the death penalty.

The 18th century penalties were severe. Unlicensed violators, repeatedly avoiding quarantine, could suffer death for "continued contumacy"; concealment of a stricken person became a felony and carried with it a forfeiture of £200. A Captain's failure to quarantine crew and passengers resulted in forfeiture of the ship and of £200 by the Master who, if he concealed plague on board, was subject to death as a felon.

In 1800 Parliament passed an Act for the erection of a lazarette on Chetney Marsh which was on the East side of the Medway Quarantine Station in Stangate Creek. On it £65,000 was spent in 1800 and another £30,000 in 1804.

At one time hulks were used for the accommodation of persons and goods from infected or suspected ships.

Hulks were also used as dwellings and prisons.

TIDE BREAKERS. (8)

Samuel Ireland, writing in 1793 of the hulks moored at Sheerness, states:-

"The old ships of war stationed here are termed 'water breakers' from their breaking the virulence of the tides. The hulks are occupied by 60 or 70 families and chimneys of brick are raised from the lower gun deck which gives them the wholesome appearance of a floating town."

QUARANTINE HULKS.

Of those moored in Stangate Creek he writes:-

"Here hospitals or lazarettos are built on the hulks of 2 x 44 gun ships which, from their being roofed and tiled, have a singular and amphibious appearance. On board these ships a regular quarantine is established for all ships coming from the Levant and other suspected places to prevent the infection from the Plague or other contagious disorders which may be brought into the Kingdom."

This is how John Evans, writing on "A Sail Down the Medway", describes Stangate Creek Quarantine Station a few years later:-

"We beheld on our left those vast ponderous hulks devoted to the purpose of quarantine. Here bales of goods are deposited to prevent the introduction of any infectious disease from the eastern parts of the world. They resemble Noah's Ark in size and shape. Most commendable is it in our Government to take this precaution in respecting our health, the most invaluable of our blessings. The Plague which visited the British Metropolis in 1665 and destroyed thousands of its inhabitants was conveyed by a bale of wool from Turkey."

CONVICT SHIPS ON THE MEDWAY.

Those who have seen the film "Great Expectations" will recollect the portrayal of the convict Magwitch who, with many others, was probably incarcerated in one of the convict ships on the River. The system of selling prisoners for a term to American planters had ceased with the Independence of America. As a result the gaols became grossly overcrowded and in 1776 an Act was passed for the establishment of convict hulks, some of which were moored in the Medway. There were others at Woolwich and Portsmouth. Mortality among the prisoners was heavy. On an old ship named the "Justicia" at Portsmouth 166 of 632 prisoners died in 19 months (John Howard). (17) In the Medway Hulks the convicts were mostly "long stretch" men convicted of malicious injury. They were chained on wrists and legs and their treatment was harsh. At a later date they were housed on St. Mary's Island which was incorporated in the Dockyard extensions of 1860 on which 1200 convicts were employed. (18)

PRISONER OF WAR SHIPS.

Other hulks were used as prison ships during the Napoleonic Wars. John Evans also comments on them in his "Medway Cruise" in 1811. "We were soon amidst the French Prison ships, 8 or 9 in number, containing near 10,000 prisoners. Many of these poor creatures, sallow and emaciated, had been entombed alive for several years. I was aboard the "Glory", the largest of them, for nearly two hours.....In this ship alone were nearly 900 prisoners.....We understood there were Dutch, Spanish, Portugese and even Danes amongst them. These were at the very time we were onboard drafting off to serve in our men of war.....The ship was very clean and every attention paid to their comfortable accommodation."

These French prisoners were very ingenious with their hands, making model ships, (1) from suitable pieces of bone collected from their ration, in perfect detail and some of the better craftsmen forged Bank of

(1) Specimens of model ships made by the prisoners can be seen in Rochester Museum.

England notes with hair pencils. "Indeed the frequency of these forgeries at that very time had thrown the inhabitants of Rochester and Chatham into no small consternation." (18)

"During their incarceration many died and were buried at various spots on the marshes lining the river. During the Dockyard extensions in 1855 a number of the graves were exposed. With due reverence they were re-interred in a cemetery, formed by the Admiralty on St. Mary's Island, which was laid out with shrubs and a fine memorial erected. In 1902, as an honour to the vanquished, the bodies were again taken up and, with the monument, were transferred to a secluded part of the R.N. Barracks, beside St. George's Church. (4) Their epitaph reads:-

"Here are gathered together

The remains of many brave soldiers and sailors
Who, having once been the foes, afterwards the
Captives of England.

Now find rest on her soil,
Remembering no more the animosities of war
Or the sorrows of imprisonment.
They were deprived the consolation of closing their eyes
Amongst the countrymen they loved
But they have been laid in an honourable grave
By a nation who knows how to repect valour
And to sympathise with misfortune"

"The majority of the ships moored in the Medway were, at this time however, naval craft held in reserve and manned by a boatswain, six men and a cabin boy."

There is still a reserve fleet but no residential hulks. The only modern replica is the houseboat which brings its own public health problems to the local Authority and maintenance difficulties to the owners.

BENEVOLENT INSTITUTIONS

The initiation and endowment of many social benefits to the local community is associated with the names of men who had retained generous recollections of the Medway where they had worked and prospered during their day.

As already described (p. 14) St. Bartholomews' Rochester the first hospital in England was built and endowed in Rochester by Bishop Gundulph in 1078. It was for lepers originally but has developed into a 200 bed modern hospital.

Newark Hospital in Strood and St. Catherine's Hospital in Rochester are other hospitals which were endowed in 1158 and 1313 respectively.

ST. CATHERINE'S HOSPITAL.

The Mayor of Rochester in 1305, Simon Potyn. (Master of the Crown Inn near Rochester Bridge, a famous hostelry in its day) was one of the earliest benefactors. Apart from being Mayor and M.P. in several parliaments, the proximity of his Inn to the river and its main quay no doubt brought him into close contact with those using the

Port * He endowed a hospital, which he called "The Spittell of St. Katherine of Rochester" in the suburbs of Eastgate, for lepers and other "pouer mendicantes". In 1805 new buildings were erected on Star Hill for the reception of aged persons. The disused buildings on the original site (rebuilt in 1717) were converted into cottages and shops at the same time, and were eventually pulled down in 1926 for street widening. (16) Eighteen persons reside at these almshouses at the present time.

THE CHEST CHATHAM.

Sir Francis Drake and Sir John Hawkins, both famous English Admirals, planned probably the first voluntary insurance scheme of a national nature, in that it embraced the whole of the Royal Navy.

Drake was the son of the Reverend Edmund Drake, who was scripture reader to the Navy which wintered in the Medway. He had eleven sons, including Francis, who lived on one of the King's Hulks. At the age of nine the future admiral was apprenticed on a hoy trading from Rochester. (4) Sir John Hawkins was born in Plymouth and between them, in 1588, they planned the fund which is usually styled "The Chest at Chatham", the proceeds of which were to be applied to the relief of sailors maimed in the service of the Crown. By this scheme the seamen who belonged to the Royal Navy voluntarily agreed "to have defalked out of their monthly wages for ever, the following sums:- out of the wages of every mariner seaman and shipwright receiving 10/- per month or more:- 6d. per month: out of the wages of every grommet receiving 7/6d. 4d. per month: out of the wages of every boy receiving 5/- per month 3d. per month, for the perpetual relief of such mariners, shipwrights and seafaring men as by reason of hurts and maims received in the service were driven to great distress and want". (2)

The sums collected were to be distributed under the superintendence of the principal sea officers; the overplus to be deposited in a strong 'Chest' with five locks, the keys of which were to be kept in separate hands!

As the benefits of the 'Chest' became more apparent, Charles II granted to the funds 12 acres of land near Rochester (Delce Road). By 1672 the funds were also increased by the deduction of 4d. or 6d. from the wages of all seamen for the pay of chaplains and surgeons of the Navy (known as 'solers and heelers'; in such ships where none were borne, and in 1688 the fines imposed by court martial were added by a grant of James II.

Certain abuses and mismanagement occasioned the removal of the 'Chest' to Greenwich in 1802 after a naval enquiry. The average number of pensioners in the 30 years prior to 1816 was about 5,000 yearly, the amount of pension being based on the degree of disability. Where a wound did not prevent a sailor from earning his living and where he had not lost an eye nor limb, a small sum was paid in full satisfaction:- for the injury sustained... called 'Smart Money'.

The stock in 1816 was £300,000. (2)

SIR JOHN HAWKINS' HOSPITAL

Hawkins, not satisfied with just promoting the 'Chest' founded and endowed at his own cost a hospital in Chatham, to be a comfortable

*His son by a Parliamentary writ was appointed one of the Collectors in the Port of Rochester in 1322 (Arch. Cont. XII).

retreat for 10 to 12 "poor and decayed mariners and shipwrights". It was founded in 1592 and was granted a Charter by Queen Elizabeth in 1594. The Charter was kept in the Chest belonging to the Hospital. Originally twelve pensioners were settled in the hospital with a weekly stipend of 2/- each. The institution consisting of dwellings still exists in the High Street, Chatham.

RICHARD WATTS CHARITY. (16)

Another great benefactor was Mr. Richard Watts who was elected M.P. for the City in 1563. His official position was described as "Purveyor to the King's Ships" but he was also Surveyor of Ordnance at Upnor Castle and Collector of the Revenues of the Bridge Trust. He died in 1579. By his will he left his estate for the perpetual support of an almshouse already erected to which by his will, had to be added "six several rooms for the comfort placing of the poor within the said City to harbour or lodge in poor travellers or wayfaring men being no common rogues or proctors to lodge therein no longer than one night unless sickness be the further cause thereof and at their first coming in to have 4d.". This house for "the seven poor travellers" of Dickensian fame stands in the High Street, Rochester, nearly opposite the Cathedral.

The Charity was managed originally by the Corporation but differences between the Council and the Freemen as to its administration resulted in the formation of a joint Committee of Freemen and Councillors. As a later date, under a scheme sanctioned by the Charity Commissioners in 1886 the management was and still is by a representative body known as "Watts Trustees".

The estate in 1579, when he died, had an annual income of £36 16s. 8d. As land values increased the income rose to £300 in 1672, £500 in 1696 and by 1899 was £4,000 p.a. The annual revenue in 1951 was about £14,000.

As the values increased additional provisions were made. Almshouses for elderly persons were built in Maidstone Road, Rochester; "out" pensions were granted. Large grants were made annually to St. Bartholomew's Hospital, Rochester, and scholarships were granted to local schools and dockyard and other apprentices. A fine domiciliary nursing and domestic service was also provided, 10 nurses and 3 "Home Helps" being employed before the war. Hygiene and recreation were not omitted from these benefactions, slipper baths and a swimming pool being erected on the Esplanade, Rochester.

THE FOORD ALMSHOUSES.

The Foord family had close association with the Port and City and were generous benefactors to the Cathedral Church, St. Bartholomew's Hospital and to the Corporation and citizens.

Thomas Hellyar Foord, who died in 1917, by his will founded and liberally endowed almshouses in Priestfields, Rochester, which from the architectural point of view, lay out, and excellence in every way, are quite unique and are well worth a visit, particularly for those interested in hostel accommodation for the aged. The buildings were erected in 1927 at a cost of £110,000, including land. Originally, accommodation was provided for 37 single men or women and 10 married couples, since increased to 49 single and 14 married people. The residents live rent free, paying only for food, other personal requirements and the gas for cooking; the

buildings are centrally heated but $\frac{1}{2}$ ton of coal is provided annually to each residence. Contributory pensions are augmented from the endowment funds up to £4. 0s. 0d. per week for a married couple and £2. 6s. 0d. for a single person. There is a resident matron and nurses to care for them if ill or infirm and there is an eight bed sick bay with treatment rooms and dispensary; a resident staff to do the heavier domestic work for the feeble; a resident warden to look after maintenance and administration, a resident stoker and a visiting doctor. Annual outlay including augmentation of income is £10,000. As a matter of interest these almshouses were the first buildings to be registered under the Protection of Ancient Buildings' Act and are thus ensured a life for all time. (k)

THE ROCHESTER BRIDGE AND ITS WARDENS.

It may seem strange that the administration of a bridge should eventually be in a position to promote social services, but such was the accomplishment of "The Wardens and Commonalty of New Bridge, Rochester" established by statute in 1420 (9 Henry V), which constituted them a Corporation with a Common Seal. The Bridge had existed since early Roman days. The Roman Bridge was eventually replaced about 960 by the Saxon Wooden Bridge which was maintained by the surrounding manors and lasted until 1387. In its turn it was replaced by a stone bridge situated about 50 yards further up stream opposite the Bridge Wardens' chapel on the Esplanade, which was erected about the same time (1397). Sir R. Knowles was the founder of the Stone Bridge "from the spoils of the French towns, castles monasteries and cities which he burnt and destroyed". Sir Robert de Cobham also assisted in financing the Bridge. (2)

This stone bridge lasted until 1856, by which time it was found that the huge starlings of the Bridge, by interfering with the natural flow of the tide, had caused shoals to form which affected the Dockyard at Chatham and deep water berths at Rochester.

A new iron Bridge was erected on the same site as the old Roman Bridge and was completed in 1856 when the old stone Bridge was demolished. In 1914, to accommodate the increase in the amount and size of shipping, the superstructure was raised and rebuilt at a cost of £100,000 entirely from funds accumulated by the Bridge Wardens. By an Act of 1908, all owners of contributory lands had no further liability in bridge upkeep, the responsibility of which was put on the funds belonging to the Bridge Trust of "Wardens and assistants of Rochester Bridge in the County of Kent" and the "Wardens and Commonalty of the New Bridge, Rochester", which had existed for five centuries, ceased to exist.

Under their prudent management the Trust had flourished to such an extent that not only were they able to carry out their primary duty of executing "works tending to facilitate the passage over, under and across the Medway" but they were able to materially assist in the establishment of Grammar Schools for Girls at Rochester and Maidstone by grants of £10,000 to each, and also substantial help was given to boys' schools in these two towns. (16)

The City has, of course, benefited from the generosity of many other of its inhabitants through the ages but none have been more munificent in establishing such great social institutions than the mariners and their associates in ships and shipping.

(k) From information kindly supplied by the Warden Mr. Coe.

T.S. ARETHUSA.

Although not a local foundation, mention must be made of this excellent training ship which lies off Upnor. Originally she was the four-masted Barque "Peking" which was employed on the Australian and South African trade. She was purchased by the Shaftesbury Homes in 1933 to succeed the old frigate "Arethusa" which had trained boys since 1874, and which succeeded the original Shaftesbury Homes ship founded in 1866. She has been completely remodelled internally to provide the best type of accommodation for her particular function of preparing boys for H.M. Navy and the Mercantile Marine. There is accommodation for 240 boys of good character who undergo two years training and education; entry takes place between 13 and 14½ years of age. In addition to sleeping accommodation aboard, there are classrooms, kitchens, gymnasium, sick bay and library; she is centrally heated and well ventilated. There is also a shore establishment which includes a fine indoor swimming pool, extensive playing fields and modern hospital quarters. The whole is dependent upon voluntary contributions and, as a Secondary Technical School, is assisted by Ministry of Education and Local Authority Grants which represent approximately half the cost of upkeep, now very high.

Many fine sailors have begun their career on the "Arethusa". A whole-time nurse and visiting doctor are on the staff. The ship and shore establishment is under the command of Commander M.H. Le Mare, R.N., (Ret.) at the present time, and is governed by a Sub-Committee of the Society under the Chairmanship of Admiral Sir Henry Moore, G.C.B., C.V.O., D.S.O. (Full information about entry, etc., will be readily supplied on application to the Captain).

POLLUTION OF THE RIVER MEDWAY.

There was a statute of Richard II in 1380 forbidding the throwing of refuse into water near towns, which suggests that river pollution is not entirely a modern problem. (12)

In the existent Rochester Customal, in which the earliest entry is 1536, there was a correction "for such as lay dung on the Town Quay" and, of many byelaws made in 1673, one prohibits the casting into the river (and streets) "any offal, filth or sulledge on pain of 3/4d." On 14th May, 1642, a Council Byelaw was made requiring all the inhabitants to carry all their "dirt and sullage" to a specified site on the Common. If such dirt and sulledge was deposited elsewhere to the "stinkings and annoyance of the inhabitants", the offender forfeited 3/4d. to the Chamberlain of the City.

The extent of the present day pollution of the river indicates that the "pain of 3/4d." inflicted on the culprits has had little or no effect in preserving the amenities of the river.

The present state of affairs has arisen from the increasing urban population and the continuous commercial and industrial development since that time and the conversion of the "privy" to "water carriage" system of sewage disposal in earlier days before sewage works were in existence. (a)

- (a) In 1912 Rochester and Chatham Drainage Board was formed under a Provincial Order. In 1914 Engineers were engaged to prepare plans for a joint sewer starting at Rochester going through Chatham to Motney Hill Marshes at Rainham. The war intervened but work commenced in 1925. The official opening took place in Dec 1928.

The cumulative effect of discharging all types of effluent into the river was never appreciated or, if it was, neither councils nor commercialists were able to give it much attention. For, in fact, legislative powers did not exist to prevent this continuing pollution. For example, the Malling Council unsuccessfully applied in 1888 to have a section of the river declared "a stream" in order to prevent the section in question from being polluted by the Maidstone sewage. The Port Medical Officer, Rochester, in the early nineties was expostulating with the Naval and Military Authorities about the discharge of crude sewage into the river from certain establishments and was warned off by such replies as that of 11th April, 1896, "drainage scheme has been executed under the Medway Conservancy Act, 1881, and is not in contravention of the River Pollution Act" and the Admiralty were quite correct in their assertion as 'tidal rivers' were outside the scope of the River Pollution Acts unless included by an order of the Minister declaring such tidal waters to be a 'stream'.* Early in this century the Port Sanitary Authorities of London and Rochester met in conference on the pollution of the estuary but got no further than an unheeded request to the L.G.B. for additional legislation.

The Medical Officer of Health, in his Annual Report of 1895, recommended "every advantage should be taken to reduce the pollution of the river now" i.e., by abolishing existing outlets under proposed new drainage scheme. Here is an extract from the Medical Officer's Report in 1896. "It must be a great source of regret that a river affording such excellent opportunities for healthy enjoyment should be used for the reception of sewage. Land waters with earthy matters carried in transit cannot be helped, but when human excreta are being added to the mud banks of the river no wonder can be felt that the wash occasioned by passing steamers stirs up something which is not ozone". And again, the following year, "The river is still a convenient receptacle for all that can be poured into it not only from Rochester and Chatham but also from the various government establishments situated on its banks".

An extract from the 1900 Annual Report is still true today, "When the City of Rochester has carried out a proper system of drainage as the Port Sanitary Authority she will find plenty of opportunities for complaint against other communities".

Rightly or wrongly, H.M. Establishments in the Port have been regarded as generous contributors to its pollution but it is unlikely that they were the major offenders as a main sewerage scheme was not completed until 1928. At the end of last century the Medical Officer of Health of Chatham reported that, although the Medway Towns were cesspool towns about 1/6 of the Chatham sewage found its way direct to the River and there can be little doubt that in those days the main pollution was from the civil community.

Nevertheless, on many occasions the Port Authority crossed swords with the Naval Authority in the question of pollution. Some 50 years ago H.M.S. "Actaeon", the former Torpedo School, was moored in Stangate Creek (the former Quarantine Station) which had valuable oyster layings (£10,000). The "Actaeon" housed several hundred men and all sewage was discharged direct into the Creek. This brought expostulations from the Port Authorities of London as well as Rochester and the Fishmongers Company who asked for the ship to be moved elsewhere or for all excreta to be buried ashore.

*The Medway has never been declared a 'stream' by the Minister.

The Admiralty pleaded they could see no objection to mooring a ship in the Quarantine Station, to which the Port of London replied that Quarantine had been abolished in 1896, that the Stangate Creek Station had been closed since 1869 and since that date no vessel had been dealt with there, the last prior record being a vessel from Magador in 1835. Mr. Aspley Kennette, the Rochester Town Clerk, wrote to the Admiralty on the 16th March, 1906, "On behalf of the fishery and their lessees I am bound to repeat that if anything serious should result from the mooring of the ship in its present position, their Lordships will certainly be held responsible". But H.M.S. "Actaeon" remained at her moorings. She was not by any means the sole cause of the oyster bed pollution in the river, for in many of the oyster creeks 'Watch Boats' with a crew of two or three were moored and sewage from this source was deposited directly over the layings. (j)

An inspection was made by Dr. Bulstrode of the Local Government Board in 1896, who reported that the layings in Ham Ooze, Colmouth Creek, Stangate Creek and Sharfleet Creek were largely protected by their distance from the main channel and the enormous volume of water in the Medway. A further survey was made in 1904 by Dr. S. Rideal (on behalf of the Medway Conservators), who found the fisheries no longer worked at Hoo Flats, E. Hoo Creek, Stoke Ooze and Rainham Creek. Existent Fisheries at this time were 1 Slede Ooze (Mr. R.J. Passby), 1 Bishop's Ooze (T. Pocock), 2 Ham Creek (Mr. Fieldgate) 1 Sharfleet Creek (W.H. Williamson), 1 Colmouth Creek (Mr. Bean), 1 W. Hoo Creek (Mr. Tabor), 1 Bartlett Creek (Mr. Bean); Periwinkles at Mullins Hole, Slede Ooze; Mussels worked at Bishop's Ooze. Samples were taken from several of the active layings; the number of colonies on Gelatine plates varied from 7 at Colmouth to 199 at Bartlett Creek. Pure cultures allied to B. Coli or the Gaertner group were obtained from Mullins Hole (Periwinkles), Ham Creek, Colmouth Creek and Bartlett N. and S. (Oysters). Dr. Rideal's conclusions were as shown below and it was on further adverse bacteriological results in succeeding years that finally in 1936 a closing order was made on the Oyster Fisheries.

1. Free from all organisms indicative of sewage contamination, therefore clean, Bishop's Ooze, Sharfleet Creek and Pond, Colmouth Creek Pit, Ham Creek.
2. Containing B. Coli or B. Enteridis Sporogenes, therefore not free from suspicion, Colmouth Creek itself (Coli), N. Bartlett (Coli and Enteridis Sp.), S. Bartlett (Coli), Slede Ooze (periwinkles:- B. Coli).

These fisheries, famous from time immemorial, had, on account of the risks attendant on river pollution, to be closed in 1936. Under the Public Health Shellfish Regulation of 1934 all direct sales were prohibited unless the oysters had been passed through an approved cleansing station or relaid in approved waters for not less than 14 days during the months March to October. Periwinkles were excluded from the order. The Corporation, in consultation with the Oyster Fishers seriously considered building a cleansing station but as no guarantee could be given that a continuous supply of oysters would be forthcoming to ensure the economic operation of the plant the project was abandoned. As a result the Oyster Fisheries are defunct but the ancient ceremonial of the Admiralty Court and Jury is still an annual event.

It is to be hoped that the establishment of River Boards under the Act of 1948 may eventually lead to a general cleanup of all our rivers but this must be, of necessity, a long and difficult task. The new Boards will, however, have unified control, dealing not only with River pollution but also with land drainage and fisheries superseding Catchment and Fishery Boards and Local Authorities.

Whether the River Medway will ever return to its pristine salubrity as described by various writers of the past is very doubtful. In 1543 it was described as "a delightful brave river" and a "sweet stream". Pickwick, from Rochester Bridge, found "The river reflecting the clear blue sky, glistened and sparkled as it flowed noiselessly on".

ROCHESTER AND THE CROWN.

The many rights and privileges granted to the City and Port by the Crown mark the Royal patronage, at least, from the time of the Norman Conquest to the end of the reign of James II who, on losing the throne, made his escape from Rochester (which will be alluded to later).

The Saxon and Danish kings were much less solicitous of the welfare of the local inhabitants. During the five centuries after the Romans departed their visits were far from welcome.

Fierce as were the Saxons raids, the City suffered worse from the Danes who were the most ferocious and merciless of all, repeatedly laying the City and Church and Riparian hamlets in ruins and murdering without discrimination of sex or religion.

Although of a less brutal character there were further sieges in Norman days, sometimes by the King at others by the Barons (see p.33)

It appears that the City departed from its usual loyal tradition in the rebellions of Wat Tyler (1381), Jack Cade (1450) and Sir Thomas Wyatt (1554). The rebels on each occasion met with a welcome in the City and many local men took part, among the leaders in 1381 being John Ferroure of Rochester. In the Wyatt rebellion the Queen's (Mary) ships in the Medway were siezed by the rebels who made their Headquarters in the Castle. Kent was divided in opinion but the then Mayor of Rochester who was loyal to the Queen managed to escape and join her forces at Malling on 27th January, 1554.

In the 1450 rebellion Cade had collected much loot which he sent round by barge from London to Queenborough whose Mayor was one of his supporters. When the rebellion collapsed Cade fled with a price on his head. He was killed locally by Alexander Iden who was anxious to obtain the reward and had been watching Cade's movements from Rochester. Cade's body was taken to London and quartered. After his death, Lord Chancellor Kempe went to Rochester to restore order and to seize Cade's loot, out of which £40 was given to the citizens "to make the Eastgate".

The City was, undoubtedly, loyal to Charles I and raised forces in his support which were routed by Fairfax who, writing from Rochester after its subjection on 4th June, 1648, stated "I have secured the Mayor (Phillip Ward) of Rochester whose hand is to the commission for raising of forces". (16)

There have been numerous Royal visits under more auspicious circumstances, some passing through the City, others residing for short periods for specific purposes. Others have come under duress as did John, King of France, after his capture at Poitiers in 1357; and the Queen of Robert Bruce with her sister, the Bishop of Glasgow and the Earl of Mar in 1314. They were lodged in the Castle, the King of France for one night, Bruce's wife was released with her retinue, after the Battle of Bannockburn.

Henry VIII greeted his future wife, Anne of Cleves, for the first time in one of the residences attached to the Cathedral in 1540 and was obviously disquieted by the unattractive appearance of his 'Flemish Mare'.

The Tudor and Stuart sovereigns were frequent visitors taking a great interest in the Navy, inspecting ships, dockyard and fortification. They usually resided at the Crown Inn during their visits.

The last Stuart King, James II, who had often been a visitor under happier conditions, came to Rochester to leave his Kingdom for the last time on 31st December, 1688. "The hoy on which he had embarked for France, lacking ballast, had to run ashore at Sheerness. He was seized and searched but not recognised. He was taken ashore at Faversham and in an Inn was so insulted that he declared himself King. The Earl of Winchelsea, hearing of his detention, had James taken to the Mayor's house and informed London. James returned to London which he entered almost in triumph but he soon found that the Common Council and the City were against him. William (his son-in-law) refused to come to London whilst he was there and James was compelled to leave the Metropolis". (16)

"He begged that he might be allowed to remove to Rochester which, being granted, he continued here for a week (in the house of Sir Henry Head) under the protection of a Dutch guard. But seeing there was no possibility of his keeping possession of the Throne and likewise alarmed at the fear of his personal safety he privately left the City the last day of the year and embarked for France aboard a tender in the river which, at the time, was impressing seamen. The master of the tender was one Browne, a citizen of Rochester, who landed the King, the Duke of Berwick and some others who accompanied him at Ambleteuse in Picardy." (2) Parliament then requested William III to assume the Crown.

Queen Victoria visited the City as Princess in 1835 and again as Queen in 1855, to visit the Crimean wounded in Fort Pitt. She stayed on one visit at the "Bull" Inn. All her successors during the past 100 years and many other members of the Royal family have visited the City and Port, which may justly be proud of its historic and loyal association with the Crown in the past 1,000 years.

PORT BOUNDARIES

In the earliest City Charters the port boundaries were defined as "By the water of Medway aforesaid, that is to say, from Shireness all along up to Hawkewood", a distance of about 18 miles.

In the course of time the boundaries were extended and by 1882 included an additional area "to extend 3 miles seaward" from a line

"between the N.E. extremity of the Isle of Grain easterly across to the entrance to the Medway and along the coast of the Isle of Sheppey to the land's end in the parish of Warden".

This boundary was altered the following year when the powers of the Port of London Sanitary Authority were extended over the whole of the Customs Port by a Treasury warrant of 1st August, 1883. This meant that in the River area between the Isle of Grain and the Isle of Sheppey and seaward for 3 miles, Rochester had to relinquish its jurisdiction to the Port of London. The actual boundary line between the two ports is now from the S.E. point of Colemouth Creek on the N.E. to the westernmost point of the piece of land which joins the E. side of Stangate Creek on the S.E. of the river. The upper boundary of Rochester port remained at Hawkewood which is marked by a stone originally ordered to be erected by a minute of 8th July, 1799 and replaced on a pedestal by the conservators in 1896 (16)

This loss of a very valuable deep waterway at the mouth of the River where ships of 30,000 ton can lie alongside the jetties at all states of the tide was the subject of an appeal to the Treasury. In their reply of 12th August, 1884, to Sir Arthur J. Ottway Bart, M.P. for the City, while referring to Rochester's ancient rights, stated they were unable to admit the Corporation's claim to this section of the river.

Formerly, to preserve the boundaries it was not only the custom but the duty of the Mayor to "beat the bounds" with council members and citizens. A council minute of 24th September, 1591, confirms this duty as an annual one, neglect on the Mayor's part resulting in a fine of £5. and on that of his 'brethren' £2. Defaulting citizens had the option of disenfranchisement or a fine of 10/- Some 40 years later, however, the Council seems to have had no great desire to continue this annual event for in a minute of 8th August, 1629, they decided on "no further perambulation for 6 years". Eventually it became spasmodic and irregular and ceased in 1856, although the conservators still continue to 'perambulate' by boat on their annual inspection of the river and its boundaries. (16)

COMMERCE IN THE PORT.

EARLY TRADE

By some it is assumed that there was a local trade with the Phoenicians and later, with the Greeks. This is largely hypothetical but there is evidence of an international trade with Gaul before the Roman Invasion. In 1927, a hoard of coins minted in Gaul in 150 B.C. was dug up at Westerham. In the mound tombs of ancient Britain are found, not only pre-invasion Roman articles, but Egyptian glass beads. (17)

Soon after their conquest the Romans established a Military fort in the vicinity of the present castle, and bridged the Medway, at first by a ford near the present bridge. As a result the City began to assume a greater importance as a military and commercial centre and trade was opened up with Rome although, according to Roman records, most of the original exports consisted chiefly of slaves and hunting dogs.

Nor does it seem that there was any great commercial activity in Saxon times "Whatsoever the estate of this City was before the coming in of the Saxons, it seemeth that after their arrival the maintenance

thereof depended chiefly upon the residence of the Bishop and the religious persons; and, therefore, no marvel is it if the glory of the place were not at any time very great" (Lambarde in 1570. He was apparently very anti-Popish). (10)

After the Romans left, internecine strife and the Pictish and Saxon Invasions disrupted commerce but as the Saxon Heptarchy became established, maritime trade was resumed and by the end of the 9th century long sea voyages were being made. As a stimulus to trade, a law was passed by King Athelstan (925-940 A.D.) which entitled any merchant, making three long voyages at his own expense, to noble rank. The same King, "considering Rochester to be a Principal Port" (Denne) as a further stimulus to commerce, sanctioned the establishment of three minting houses in Rochester (930 A.D.), two to belong to the King and one to the Bishop of Rochester. These mints were eventually removed to London by order of King John.

CHARTERS AND PRIVILEGES. (16)

Trade was further expanded after the Norman Conquest. Their system of legislation by Charter initiated and granted many trade concessions to this Port. The first Charter was granted in 1189 (Richard I) and was followed by several others, the last being in 1687 when James II renewed all the ancient privileges and liberties, many of which had been bestowed on account of the defensive and strategic importance of the City in those days.

One of the great Charter benefits was an exemption from all tolls and dues in all the Ports, Towns and Markets of England. Powers were also given to make regulations governing the trade and navigation of the Port. No "Foreigner" was allowed to sell Victuals or Merchandise upon the River at any place but the Town Quay until the duties were paid. As an example of such duties "foreigners" had to pay 4d. for wharfage and tolls such as 1d. for a quarter of grain and ½d. for a barrel of herring were levied. There was also a toll on all strangers and their vehicles passing through the City, 1d. per person, 4d. per laden wagon, which imposition may have originated the uncomplimentary nicknames given to the Medway Towns: "Starve'em" (Strood), "Rob'em" (Rochester), and "Cheat'em" (Chatham).

One of the earliest monopolies which the City enjoyed was the permission to have a Guild Merchant which virtually controlled commerce in the Port as well as the City. No person could trade in the town unless they were members or freemen. The Guild could pass laws to maintain Rochester's interests against outsiders. Each member of the Guild had to subscribe to its funds and obey all its regulations. These and other rights had been confirmed in the Charters of Henry VI and Edward IV and again in 1620 (James I) after the Attorney General had queried their legality.

All these benefits must have placed the Rochester Merchants in a particularly advantageous position for coastal, and only to a lesser degree for international trade. Either in spite of, or because of this monopoly, by the time of Queen Elizabeth when a local survey was made in 1561, there was only 144 inhabited houses and only 27 persons engaged in shipping. The Merchant fleet consisted of six ships with a total tonnage of 148 tons. These figures refer exclusively to the City: there must have been many more commercial vessels trading from the Port, as in Elizabeth's reign the Dockyard was being extended.

All these monopolies ceased with the passing of the Municipal Corporations Act, 1835, but the Corporation continued to be the Conservators of the River, controlling the navigation and collecting the River dues until 1881, when they sold their River dues to the present Medway Conservancy Board who, by their Act of Parliament, assumed the whole of the jurisdiction of the River except that of the Fishery, the Free Fishermen and Port Health Administration

OYSTER FISHERIES. (16)

The fishery has always been free to all those who served a seven years' apprenticeship to any fisherman or dredger who was a Freeman of the Oyster Fishery. An Act confirming the very ancient powers and jurisdiction of the City over the Fishery was passed in 1728. By this Act an Annual Admiralty Court continued to be held, at which a Jury was impanelled to make rules and orders for preserving and regulating the Fishery. The Admiralty Courts are still held on a boat in the river and are presided over by the Mayor and Aldermen, the fishermen being summoned to attend by the Water Bailiff. The Jury having been appointed, regulations are made dealing with such matters as opening and shutting the grounds, 'selling the Stint' i.e., the quantity each oysterman could take, and the preservation of Brood and Spat. The fishery was quite an industry, some 200 dredgermen being engaged in it less than 100 years ago. In 1914, when the Main Drainage Board was formed the Fishery was paid a certain sum so as to prevent further claims for compensation on account of pollution of the river. From this time onwards the grant of leases was made by the Board.

The Customal of 1607 indicates that by ancient charters and custom the Mayor had the right of all fishes" which included sturgeon, salmon, lampreys and sole. There are records of many sturgeon having been caught, the last being in 1862: it was sent to the Archbishop of Canterbury. Another caught a few years earlier was sent to Queen Victoria. It is regrettable that salmon have also ceased to frequent the river.*

Under very old charters the London fishermen also had fishing rights in the Medway up to Upnor where there is a London Stone dating from the year 1206. As may be imagined, this led to periodic conflict and there is an authenticated account of an armed assault in 1236 on 14 Rochester fishermen, in Yantlet Creek, by the London fishers who destroyed their fishing gear and lodged them in Newgate. The Rochester men were convicted before the Lord Chancellor, the Archbishop of Canterbury and others and fined 10 each.

Unfortunately, in 1936 a closing order had to be made in the oyster beds and the oyster fishing is now defunct. (See River Pollution, p 29)

PRIVATE SHIP BUILDING.

Boat construction is certainly an old established industry on the Medway. The remains of one of the earliest attempts to make a boat lie at the local museum. It was dug up at Minster marshes on the Swale and is estimated to be 3,000 to 4,000 years old.

*King Henry I confirmed to the Church (Priory of Rochester) and the monks there a certain fishery Grain otherwise called the Newewere for which they paid the Archbishops of Canterbury 5/- yearly. (E. Hasted) History of Kent, 1782.

Private shipbuilding was very active in Messrs Ross's yard at Acorn Wharf during the period 1790 - 1815 when England was at war with France. Frigates up to 74 guns were built including the "Spartan" (38 guns) which single handedly attacked the French Squadron of some 12 vessels in the Bay of Naples in May 1810, inflicting 456 casualties and capturing the brig "Sparviere" (18). This yard passed into the hands of the Foord family, two of whom were to become Mayors of the City. The family were also great benefactors to the community, one of their many gifts being the very modern hostel for aged citizens, which bears the family name and is described elsewhere. (See p. 25)

There were also three large building slips on the Strood side of the River below the Bridge. They were owned by Mr. Brindley, a nephew of Lord Nelson. The original "Aboukir" was built here but heeled over in launching and had to be broken up. The "Shannon", a frigate of 38 guns was another ship from this yard (1806). She is famous for her eleven minute duel with the "Chesapeake" in Boston Harbour in 1813, when the American struck her colours. There was terrific carnage on both ships. (18)

Apart from small craft, shipbuilding is now limited to the Dockyard.

H.M. DOCKYARD

The foundation of the British Navy was laid in the reign of King Alfred the Great who built a fleet which eventually inflicted a heavy defeat on the Danes. He captured many Danish ships which were brought into the Ports of London and Rochester.

The Dockyard was, apparently, existent in the reign of Elizabeth and was considerably enlarged by her and succeeding Monarchs.

Lambarde, in 1570, commenting on the Chatham "Harborowe of the Navie Roiall" says, "No toun nor Citie is there I dare say in this whole shire comparable in right value with this one Fleete. Nor shipping anywhere els in the whole worlde to be founde either more artificially moalded under the water or more gorgeously decked above". He also gives the names of 45 Chatham ships "that at one time and another doryde here" and he is constrained "to think dutifully of our good Queen Elizabeth by whose vigilant ministrie, care and providence, . . . the feare of outward wars removed".

In 1861 the Government acquired St. Mary's Island and made great improvements, converting it into a first class establishment. The Naval establishment has brought prowess and great economic benefits to the Community and has rendered to the local authorities many services and kindnesses, particularly during the recent War. To it the Port owes its maritime importance.

It is well known that Naval personnel are very reticent about their own activities. One must, therefore, copy their taciturn example and confine oneself to recording that many famous ships have been built here, including the "Victory" (in 1765), a vessel of 2,162 tons with 104 guns and a crew of 850, at a cost of £100,000; and that Nelson's body was brought into the port after Trafalgar prior to its lying in state at Greenwich.

This is how Pickwick describes the City's productions, "The principal production of the town seems to be soldiers, sailors, Jews, chalk, shrimps, officers and Dockyard men. The commodities chiefly exposed for sale in the public streets are marine stores, hardbake, apples, flat fish and oysters. The streets present a lively and animated appearance occasioned chiefly by the conviviality of the military".

SALT PRODUCTION. (4)

A long vanished industry from the river is recalled by a part of the river known as Saltpan Reach, which owes its name to the days when salt was obtained by the evaporation of sea water. At one time, both in the Reach itself and in Yantlet Creek, there were brine pans of some importance.*

THE THAMES AND MEDWAY CANAL.

Those delegates who came to Rochester from Charing Cross would, between Higham and Strood, pass through two long tunnels. These tunnels originally formed part of the Thames and Medway Canal which was opened in 1824. The object of the canal was to facilitate and reduce the cost of barge transport between the Medway at Strood and the Thames at Gravesend. It fell into disuse after some 20 years when the N. Kent Railway was built between Gravesend and Strood, the tunnels being used for this purpose. The Company also took over the Canal Dock (now known as Strood Dock). (16) The remaining portion of the canal between Higham and Gravesend is no longer used commercially.

COMMERCIAL DEVELOPMENT.

Mr. Denne, writing in 1772, says as the Port is possessed of one of the finest rivers in Europe, this City may be thought advantageously placed for trade, yet it does not seem that it ever enjoyed the benefit of any manufacture. He continues "Mr. Dove has a manufactory for tobacco and snuff and is engaged in making steel from bar iron.....with others also he is about to extract oil, tar and vitriol from cole and to render the coke useful to malsters and hop planters. How far it will answer to the public and proprietors, time will evince". About this time some 200 sail arrived annually.

Until the middle of the 19th century there seems to have been few local industrial undertakings apart from H.M. Dockyard. There were practically no exports other than agricultural products, chalk, salt and oysters. Imports appear to have been limited to coal, wine, agricultural and dockyard materials. (2) Progress was probably slow on account of the huge commercial development of the Port of London which overshadowed local possibilities. Even the Thames Medway Canal failed to promote trade.

CEMENT.

The ready access to chalk and the alluvial deposit of the River Medway resulted in the local development of the Cement Industry about 100 years ago. Tingey's Cement Works was the first, producing 50 tons per week; it was erected in 1851. By the end of the 19th century there were seven factories operating in the quarry locality of Strood, producing about 4,000 tons per week and employing 750 men. Cement became the chief

*There was a Salt works (Salsilacene) in the Stoke Marshes in A.D. 738 (Charter of Eadberht, King of Kent). (J.H. Evans)

The Salt works in the Isle of Grain are on the S.E. side of it next to the Medway on the estate of Mr. Davenport (E. Hasted, History of Kent, 1782).

export from the Port. Further upstream the Wickham Factory, erected in 1893 at a cost of half a million pounds, produced some 2,000 tons weekly. (18) Five factories are still in production viz: four in Strood Rural District and one in Malling Rural District.

AVELING'S ENGINEERING WORKS.

About the same time that the Cement industry was set up Mr. Thos. Aveling (Mayor in 1868) built engineering works in Strood in 1850. Mr. R.T. Porter joined the firm 12 years later which became world renowned for its steam rollers, ploughing and threshing machines. (15) The factory is now occupied by Messrs. Wingets, Machinery manufacturers, who came to Rochester in December, 1934.

SHORT'S SEA PLANE WORKS.

Pioneers in flying boat construction, Messrs. Short Brothers established their works in Rochester in 1913, their activities having previously been carried on at Eastchurch in the Isle of Sheppey. Their aircraft have become world renowned, and one of the first machines to alight on water was a Short Pusher aeroplane of box kite type. This firm was very progressive and made many aeronautic improvements and experiments. (15) The Government took over the firm during the War and the works were subsequently transferred to Belfast in 1946.

VOLUME AND TYPE OF SHIPPING.

As already indicated, by the end of the 18th century there were some 200 sail arriving annually.

Towards the end of the 19th century there were about 270 foreign and 7,000 coastal arrivals, of which 90% were sail. About this time the smaller type of coastal craft were being replaced by larger vessels with the result that early in this century coastal arrivals had fallen to about 1,000, but tonnage entering the port has steadily risen, reaching 670,000 tons in 1938. It is now about half a million tons.*

A considerable number of canal boats were registered locally. Fifty years ago there were 260 engaged in trading between Rochester and near by ports. The place of these vessels has been gradually taken by lighters and small motor craft, the number having fallen to 100 in 1924 and all had gone by 1933.

A flourishing trade which began in 1875 was the Queenborough-Flushing passenger freight service. In 1895 some 15,000 passengers arrived in the Port but in the following two years the number had fallen to about 2,000 but the service continued until the outbreak of war in 1914 but has never been resumed.

The extension of Kent paper mills and the development of petrol driven engines has led to a considerable import of wood pulp and petroleum. (m) the latter being stored in tanks in the lower reaches of the river.

The huge Isle of Grain project of the Anglo-Iranian Oil Company

*Apart from this the Medway Oil and Storage Co., between 1945/51 imported an annual average of 574,600 tons of Oils and Spirit, many of which are blended and re-exported.

(m) The Medway Oil and Storage Co., came to the Isle of Grain in 1923 building a refinery and Storage Tanks. The refinery closed in 1932 but Storage Tanks have increased in number.

is nearing completion and eventually the oil will not only be refined locally but cracked for its by-products. 30,000 ton tankers will be able to moor alongside the factory at all states of the tide. About 1,500 men will be employed, and 4 million tons of Middle East Crude Oil will be processed annually.

Recently there have been extensive industrial developments but the Dockyard remains the mainstay of the Port. A list of the main industries now in operation is appended.

Not only do great possibilities for local industrial and mercantile progress await exploitation, but there is also scope for improvement of the social conditions and amenities for the community. The many new industrial schemes which have been initiated in the past 100 years and particularly since 1945 has resulted in a considerable increase in population with which housing and other essential requirements have not been able to keep pace. Neither the eradication of social difficulties nor the development of the Port can be accomplished forthwith. But many rivers with fewer natural advantages have grown into large and prosperous ports. Is it too much to cherish the hope that the enterprising project on the Isle of Grain, now well advanced, may be the forerunner of others on the Medway in the not too distant future.

POPULATION OF THE RIPARIAN DISTRICTS
CONSTITUTING THE PORT OF ROCHESTER.

Until 1801 there was no statutory record of population and the number of inhabitants in precensal years can only be estimated from such records as the Poll Taxes which were made nationally from time to time on all persons over 14 years of age.

From such a tax in 1377 the estimated population of Rochester was 900: Strood 320, and Chatham about the same as Strood (Smetham).

A similar tax in 1661 indicates that the population of Rochester was 2,300 of which 970 resided in Strood and "the population of Chatham, then the only other considerable town in the Port and chiefly engaged in the Dockyard, was in all probability larger than that of Rochester". (Smith)

By the end of the 18th century the population of Rochester was about 9,000. Chatham 12,000 independent of soldiery.

In 1835 the City boundary was extended by the Municipal Corporation Act, parts of Strood and Frindsbury being added. This increased the City population from 9,891 to 12,058 persons.

On account of the periodic changes of local authority boundaries, the population returns from 1801 to 1921 in the appended table have been recorded in the "Hundreds" forming the riparian districts. The census figures of 1931 and 1951 are given for the Boroughs, Urban and Rural Districts. These local authority areas consist of the "Hundreds" with which they are bracketed

CENSUS POPULATION OF
OF THE PORT
AS RETURNED FOR THE PARISHES IN THE
AND FOR THE CORRESPONDING LOCAL AUTHORITY

NUMBER AND NAME OF DISTRICT AS SHOWN IN EARLY CENSUS RETURNS	FOR CENSUS RETURNS FROM 1801 TO 1921								
	NAME OF HUNDREDS AND THE CITY OF ROCHESTER		1801	1811	1821	1831	1841	1851	1861
50 NORTH AYLESFORD	<u>SHAMWELL</u>								
	(EXCLUDING COOLING WHICH IS (ADDED TO HOO HUNDRED)		3,902	4,458	5,379	6,046	6,801	7,136	7,916
	<u>TOLTINGTROUGH</u>								
	(EXCLUDING GRAVESEND & (NORTHFLEET FOR ALL CENSUS) (RETURNS		1,011	1,028	1,156	1,279	1,420	1,458	1,547
	50 TOTAL		4,913	5,486	6,535	7,325	8,221	8,594	9,463
51 HOO	<u>HOO</u>		1,708	2,026	2,583	2,623	2,794	2,845	2,861
	(COOLING ADDED FROM) (SHAMWELL HUNDRED)								
52 MEDWAY	<u>CHATHAM AND GILLINGHAM</u>		14,640	17,787	21,117	23,404	26,803	31,411	39,494
	(EXCLUDING RAINHAM WHICH IS) (IN MILTON)								
	<u>CITY OF ROCHESTER</u>		7,989	9,070	10,770	11,440	12,631	14,322	16,226
	(EXCLUDING FRINDSBURY INTRA) (WHICH IS IN SHAMWELL)								
53 MALLING	LARKFIELD LITTLEFIELD		12,235	12,916	14,715	16,742	18,259	20,040	22,022
	TWYFORD WROTHAM								
66 MILTON	<u>MILTON</u>		7,222	7,981	9,167	10,689	11,492	12,026	14,775
67 SHEPPEY	<u>SHEPPEY</u>		6,604	8,351	10,176	9,867	10,741	13,267	18,335
TOTAL			55,311	63,617	75,063	82,090	90,941	102,505	123,176

NOTES -

- Figures 1801 to 1921 from The Victoria History of the Co. of Kent, Vol. III
- Prior to the Municipal Corporation Act 1835 there were only 101 houses in Strood within the City Boundary. The Act added parts of Strood Intra and Frindsbury to the City giving an increase of 429 houses and 2 167 persons.
- The population of Chatham Parish in 1841 was 16,330 persons.
- Chatham Borough was not enfranchised until 1832.
- By a Provisional Order dated 1st April 1929 Rainham with a population of 4,335 which was in Milton Hundred was added to Gillingham M.B.
- By an Order dated 31st March 1930 Milton R.D. was combined with Sittingbourne U.D. to form the Sittingbourne and Milton U.D.
- Hoo R.D. was combined with Strood R.D. in the 1931-1951 intercensal period.

THE RIPARIAN DISTRICTS
OF ROCHESTER

'HUNDREDS' FOR THE YEARS 1801-1921

DISTRICTS FOR THE YEARS 1931 AND 1951

						CORRESPONDING LOCAL AUTHORITY 1931	<u>CENSUS</u>	
1871	1881	1891	1901	1911	1921		1931	1951
9,321	11,631	14,641	15,873	16,938	17,768	STROOD R. D.	17,533	20,824
1,539	1,621	1,627	1,580	1,674	1,770			
10,860	13,252	16,268	17,453	18,612	19,538	HOO R. D.	4,516	
3,143	3,405	3,812	4,233	3,965	4,817			
46,344	47,390	59,697	79,802	94,502	96,039	CHATHAM M. B.	42,999	46,940
						GILLINGHAM M. B. (INCLUDING RAINHAM)	61,651	68,099
16,992	19,649	23,407	27,619	28,126	28,669	CITY OF ROCHESTER (INCLUDING (FRINDSBURY INTRA)	32,377	43,899
23,945	26,636	28,768	28,976	29,044	30,322	MALLING R. D.	29,761	36,334
19,217	23,070	24,968	28,190	28,308	30,817	SITTINGBOURNE & MILTON U. D.	20,177	21,904
18,434	18,047	18,482	22,194	24,295	26,248	SHEPPEY R. D.	5,690	9,452
						SHEERNESS U. D.	16,833	15,727
						QUEENBOROUGH M. B.	2,941	3,137
138,935	151,449	175,402	208,467	226,852	236,450		234,478	266,316

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APPENDIX A

INDUSTRIAL UNDERTAKINGS WITH 20 OR MORE EMPLOYEES
IN THE DISTRICTS OF THE RIPARIAN AUTHORITIES
IN THE PORT OF ROCHESTER.

H.M. ESTABLISHMENTS AND NATIONALISED INDUSTRIES EXCLUDED

CHATHAM (Municipal Borough)

<u>Name of Factory or Undertaking</u>	<u>Products</u>	<u>No. of Employees</u>
Cement & Steel Ltd., Second Avenue,	Engines	20
Aerfoam Fire Protection Ltd., First Avenue.	Firefighting Equipment	38
Mackays Ltd., Fair Row,	Printing and bookbinding	144
Parrett & Neves Ltd., 30 High Street,	"	99
Clements F.A Ltd., 399 High Street,	"	75
Kent Art Printers, The Brook,	"	40
Photo Production, The Brook,	Fine Art printing	64
Filmer Ltd., Second Avenue,	Cardboard containers	55
Hodges & Son, 147 The Brook,	Sheet Metal	26
Moon Workshops, Meeting House Lane,	Toys, etc.	36
Hooker W. & Son, Ltd., Medway Street,	Flour	30
Whitaker E.J. & Sons, Ltd., 28 Military Road,	Tailored Suits etc.	40
Michael M.S. & Co. Ltd., Scolla House, High Street,	Clothing	50

GILLINGHAM (Municipal Borough)

Easiworks Ltd., Featherby Road,	Light Eng.	80
Welding Supplies Ltd., Beechings Way, Gillingham	Welded metal goods	51
Moore & Southcot Ltd., 142 Napier Road, 311 Station Road	Clothing	48 60

<u>Name of Factory or Undertaking</u>	<u>Products</u>	<u>No. of Employees</u>
<u>GILLINGHAM (contd)</u>		
Raynor & Sturgess Victoria Works, Westcourt Street Brompton	Clothing	54
Smith J.H. & Son (Leyton Ltd) Layfield Road	Gowns	60
Ingram Charles Ingrasyl Works Strover Street	Ladies Underwear	64
Tull A.J & Son Canterbury Street	Printing and bookbinding	22
Elm Plastics Motney Hill Road,	Plastics	40
Mullard Radio Valves Coulman Street	Valves (radio)	60
Novadel Ltd. Pier Road	Chemicals	90
<u>MALLING (Rural District)</u>		
Austen Chas Ltd Swan Street	Eng.	40
Ratzer John H. Ltd Nepicar House Wrotham Heath Platt	,	24
L.W. Tools Co Ltd Churchfields. Snodland	Jobbing Eng.	30
Thermojet Ltd. Clock Tower Bldgs. Holborough Road Snodland	Light Eng.) Electro lamps) Colour) Spraying)	50
Associated Portland Cement Mfg. Ltd Holborough Cement Works Holborough Road Snodland	Cement	303
Amalgamated Roadstone Corp Ltd (Kent Quarries) Basted House Borough Green	Quarried materials	60
Diamond Tread Co (1938) Ltd Ditton	Stone crushing and tarmac	30
Kentish White Brick Co Ltd	Bricks	28
Ightham Brick & Tile Co Ltd Ightham Common Ightham		30
Ryarsh Brick & Sand Coy Ltd	Sand Lime Bricks	35

<u>Name of Factory or Undertaking</u>	<u>Products</u>	<u>No. of Employees</u>
<u>MALLING (contd.)</u>		
Snodland Silica Bricks & Stone Co. Ltd., Ham Hill, Birling	Silica bricks	24
Ightham Brick & Tile Co. Ltd., "Nutfield", Ightham,	Tiles	20
British Legion Industries, (Preston Hall) Incorp., Preston Hall, Aylesford,	Letterpress printing	39
Burton Button Co. Ltd., Button Factory Wrotham,	Buttons	60
Brookgate Industries Ltd., New Hythe Lane, Larkfield, East Malling,	Paper	360
Hampstead (Roughway) Paper Mills Ltd., Roughway, Plaxtol,	"	40
Reed A. E. & Co., New Hythe Lane, Larkfield, E. Malling.	"	2,526
Townsend, Hook & Co. Ltd., Churchfields, Snodland,	"	700
Nichols & Son, Ltd., East Street, Snodland	Paper bags	61
Medway Paper Sacks Ltd., New Hythe Lane, Larkfield, E. Malling	Paper Sacks	525
Medway Corrugated Paper Coy., New Hythe Lane Larkfield, E. Malling,	Corrugated boxes, etc.	727
British Legion Industries, (Preston Hall) Inc., Preston Hall, Aylesford,	Furniture	70
Dura Fencing Ltd., Wrotham Hill, London Rd., W. Malling,	Fencing	100
Holoplast Ltd., New Hythe Lane, E. Malling,	Building boards	310
British Legion Industries, (Preston Hall) Inc., Preston Hall, Aylesford,	Fancy goods	40

<u>Name of Factory or Undertaking</u>	<u>Products</u>	<u>No. of Employees</u>
<u>MALLING (contd.)</u>		
Gerrish & Gwyn Ltd., E. Peckham,	Leather, currying and dressing	40
Baird, Wolton & May (Smedley Bros.,) Barming Canning Factory, Aylesford,	Canned goods	235
Cooper & Co., A.W., Birling,	Preserves	32
Goldwell Farms Ltd., Goldwell Cider Mills, E. Malling,	Cider	150
Hyders Ltd., Iron Works, Plaxtol,	Ornamental Iron	40
Lead Wool Co. Ltd.	Lead wool packings	70
Leney & Sons, F. Phoenix Brewery, Box Rd., Wateringbury,	Brewed and bottled beer	100
<u>QUEENBOROUGH (Borough)</u>		
Canning Town Glass Works, Ltd.,	Glass bottles, jars, table glassware	600
Sheet Glass, Ltd.	Sheet glass	350
Johnson Alfred & Son, Ltd.,	Sanitary earthenware	400
Sheppey Glue & Chemical Works, Ltd.,	Glue, chemicals and Fertilisers	350
Lodder W. Ltd	Iron	50
<u>ROCHESTER (City)</u>		
Gyproc Products Ltd. Gas House Road Rochester,	Plasterboard	106
Leech (Rochester) Ltd., High Street Rochester	Lenses	47

<u>Name of Factory or Undertaking</u>	<u>Products</u>	<u>No. of Employees</u>
<u>ROCHESTER (contd.)</u>		
Doust & Co., High Street, Rochester	Ships (and repairs)	51
Medway Yacht Basin, Manor Lane, Borstal,	Ships	27
Bagshaw & Son, 235 High St., Rochester,	Sheet metal	37
Burnett & Rolfe Ltd., The Esplanade, Rochester,	Sheet metal, Dairy Machinery	76
Staples Press, Ltd., Love Lane, Rochester,	Printing	185
Berry, Eade & White, Willis Avenue, Rochester,	Stationery	160
Palfrey W. Ltd., Willis Ave., Rochester,	Paper bags	185
British Sisalcraft Ltd., Temple Farm Est., Strood,	Reinforced waterproof paper	31
Elliott Bros., Airport, Rochester,	Machinery	247
Woodfield Hoisting & Man. Co., Commissioners Rd., Strood,		218
Hobourn Aero Components Ltd., Priory Road, Strood,	Machinery	800
Kent Alloys Ltd., Priory Road, Strood,	Machinery	400
Blaw Know, Willis Avenue, Rochester,	Machinery	500
C.A.V., Willis Avenue, Rochester,	Machinery	1,470
LeGrand, Sutcliffe & Gell Ltd., Airport, Rochester,	Oil mining equipment	96
Standard Telephone & Cables Ltd., Airport, Rochester,	Cables, valves, etc	300
Luxram Electric Ltd., Knight Road, Strood,	Electric lamps	135
British Oil & Cake Mills, Canal Road, Strood,	Cattle food	145
Atlas Stone Co., Canal Road, Strood,	Cement blocks	31

<u>Name of Factory or Undertaking</u>	<u>Products</u>	<u>No. of Employees</u>
<u>ROCHESTER (contd.)</u>		
Wingets Ltd., High Street, Strood,	Concrete mixing & other machinery	879
Williams Charles, Rochester House Commercial Road, Strood,	Clothing	598
Dove Phillips & Pett, 188 High Street, Strood,	Mineral waters	31
Osborne & Garrett, Knight Road, Strood,	Hairdressing Sundries	96
<u>SHEERNESS (Urban District)</u>		
Sheppey Shirt Co., Blue Town,	Shirts & Blouses	52
Newlands, Hope Street	Shirts & Collars	105
<u>STROOD (Rural District)</u>		
Alpha Cement Works, Cliffe,	Cement	150
Martin Earle's Works, Cuxton,		90
Crown & Quarry Works, Frindsbury Extra,		77
Rugby Portland Cement Works, Halling,		145
Cellactite & British Uralite Ltd., Higham,	Asbestos Cement products	607
Atlas Stone Co., Shorne	Artificial Stone	26
British Basket & Besto Co. Ltd., Cuxton,	Basket making	87
Medway Buildings & Supplies Ltd., Frindsbury Extra,	Timber buildings	143
London & Rochester Trading Co., Frindsbury Extra,	Tarpauling and sails Barge Repairs	55
Whitewall Barge Co., Hoo	Barge building and repairs	36
Berry Wiggins & Co. Ltd., Hoo,	Oil Refinery	240
Medway Oil & Storage Co. Ltd., Grain	Oil Storage	178
Isle of Grain Project of Anglo-Iranian Oil Co.	Oil refining	Under construction

APPENDIX B

PERSONS IN BARRACKS, HOSPITALS, LUNATIC ASYLUMS, WORKHOUSES AND
CONVICT HULKS IN THE RIPARIAN DISTRICTS
OF THE PORT OF ROCHESTER

JUNE 6th & 7th 1841 CENSUS

<u>BARRACKS</u>			<u>HOSPITALS AND LUNATIC ASYLUMS</u>		
	<u>FAMILIES</u>	<u>MILITARY</u>		<u>STAFF</u>	<u>PATIENTS</u>
Upnor Castle, Frindsbury	17	54	*Fort Clarence Asylum Rochester	35	65
Fort Pitt, Rochester (a)	151	637	Lunatic Asylum W. Malling	6	230
Chatham Barracks	646	2425	*Melville Hospital Chatham	44	90
R.M. Barracks Chatham	240	463	*North Hospital Chatham		35
Spur Battery Chatham	4	88	Sir John Hawkins Hospital		
Brompton Barracks Gillingham	357	1028	Chatham		23
Gunners Barracks Gillingham	26	12	*Ordnance Hospital Gillingham	21	137
Sheerness Barracks Minster	89	343			
Total	1530	5050	Total	106	580

*Military Hospitals

No mention is made of St. Bartholomew's Hospital, Rochester.

Fort Clarence Asylum became a Military Prison before the 1851 census

(a) Part Hospital

<u>WORKHOUSES</u>			<u>3 CONVICT HULKS GILLINGHAM</u>		
	<u>STAFF</u>	<u>PRISONERS</u>		<u>Number of Prisoners</u>	<u>Staff & their Families</u>
Union Workhouse Strood	8	130	Fortitude	653	59
Hoo	2	46	Euryalus	251	
Medway Union Workhouse			Wye	53	
Chatham	6	322	Total	957	
Medway Union Workhouse					
St. Nicholas Rochester	3	178			
Union Workhouse W Malling	6	230			
Milton	6	130			
Minster	9	113			
Total	40	1149			

NOTE I.

The Census return for 1811 states that on board the Hulk Zealand lying at Sheerness there were 520 male convicts who were included in the population of Sheerness. No mention of Convicts at Sheerness occurs in any other year.

NOTE II

Fourteen per cent of the prisoners were 10 - 15 years of age. Twenty seven per cent were under 20 years of age.

